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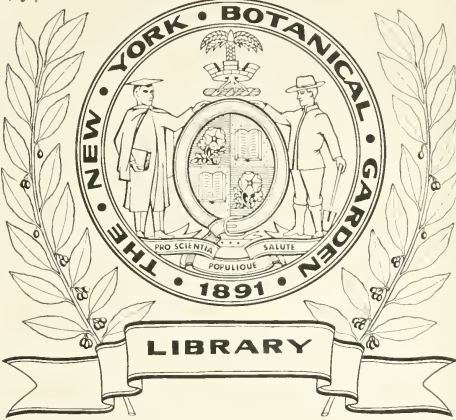
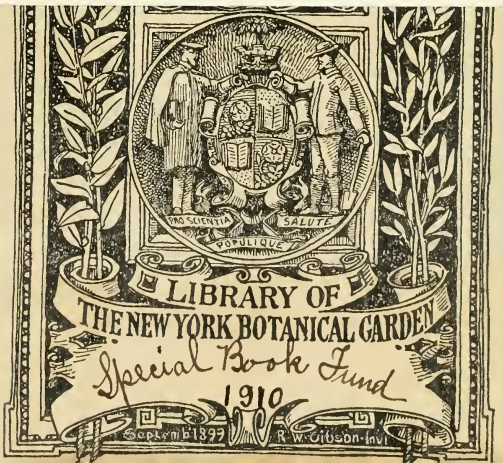




A

VOYAGE

TO

CHINA AND THE EAST INDIES,

By PETER OSBECK,

RECTOR of HASLOEF and WOXTORP,

Member of the ACADEMY of STOCKHOLM, and of the SOCIETY of UPSAL.

Together with A VOYAGE TO SURATTE,

By OLOF TORREN,

Chaplain of the GOTHIC LION EAST INDIAMAN.

AND

An Account of the CHINESE HUSBANDRY,

By Captain CHARLES GUSTAVUS ECKEBERG.

Tranſlated from the GERMAN,

By JOHN REINHOLD FORSTER, F.A.S.

To which are added,

A FAUNULA and FLORA SINENSIS.

IN TWO VOLUMES.

VOL. I.

LONDON,

Printed for BENJAMIN WHITE,

at Horace's Head, in Fleet-ſtreet.

M DCC LXXI.

THOMAS PENNANT, Esq.

Dear Sir,

TO

THOMAS PENNANT, Esq;

OF

DOWNING, in FLINTSHIRE.

DEAR SIR,

THE peculiar obligations your goodneſs has laid me under, have left me no room to heſitate one moment in the choice of a patron for this publication.

THIS work was undertaken with your approbation, enriched by you with many important additions, and has often been the ſubject of our converſation.

BUT my obligations to you are not confined to the aſſiſtance you have afforded me in this preſent work: by your favour, I, who was an utter ſtranger to

this country, have been introduced to a number of munificent and worthy friends, whoſe acquaintance is both my honour and my happineſs.

THE ſimilitude of our ſtudies was what firſt recommended me to your notice; but your humanity was engaged to receive me to a nearer intimacy from a circumſtance, which too frequently would have been the cauſe of neglect: the diſtreſſes I labour under affected your heart, and excited you to remove them in a moſt tender and benevolent manner.

HAVING no other way to expreſs the ſtrong impreſſions it has made on me, I beg leave to prefix your name to theſe Voyages; and thus publicly to acknowledge your great and moſt ſeaſonable favours. But I will ſay no more on this ſubject; well knowing, that thanks are often leaſt pleaſing where they are moſt due. Permit me, however, to offer up the moſt ſincere and earneſt wiſhes of a

grateful heart for your happineſs. May you and your family long enjoy, in full meaſure, all the bleſſings of life; and may theſe be heightened by the continuance of every intellectual and moral pleaſure. And while you are diſtinguiſhed even amongſt foreigners, as a patron and promoter of learning, eſpecially of natural hiſtory; may you continue to have in your own country the honour and pleaſure of being a father to the afflicted and neceſſitous.

I am,

with the trueſt regard,

Dear Sir,

Your moſt obedient

humble ſervant,

John Reinhold Forster.

Warrington,
Dec. 1, 1770.

THE

EDITOR'S PREFACE.

THE

EDITOR's PREFACE.

TO a nation ſo enlightened as the *Engliſh*, the following tranſlation can hardly be unacceptable, and therefore I might well have been excuſed the common appendage of a preface; but as there are many particulars relative to the author, which may contribute to ſtamp a value on this work, I ſhall briefly ſtate them without any farther apology.

THE author, Mr. OSBECK, chaplain to an *Eaſt India* ſhip of *Sweden* (his native country), was

was a pupil of the great LINNÆUS, whose name alone is a sufficient encomium. He followed punctually and literally the rules prescribed by his excellent tutor in his *Instructio Peregrinatoris*. Nothing escaped the attention of Mr. OSBECK. The history, the antiquities, the religion, the manners, the dress, the character, the policy, the government, the military and civil establishments of the country, were equally objects of his attention; and what is very remarkable, and will of course prejudice this nation in favour of our author, is, that we find the judgment of Lord ANSON about the *Chinese* confirmed and justified in his observations on the character of that nation.

THE merchant will find a minute and accurate account of many commodities brought from the East, with an exact delineation of the whole commerce of *China*. The œconomist and husbandman will find many useful and agreeable remarks in Mr. OSBECK's and Mr. ECKEBERG's accounts, which might be considered as good hints even in this country,

where

where agriculture and husbandry have been improved both in theory and in practice, to the great emolument of the inhabitants; while many facts here related are applicable to the *English* colonies and plantations. In short, the reader will find many remarks in the course of this work, that will assist him in the study of medicine, history, geography, and almost every other branch of learning.

But the natural historian will find the richest treasures in this useful performance; and as a taste for this branch of knowledge begins very justly to attract the attention of this nation, and to spread so universally that it even finds the protection of persons of the highest quality, and the patronage of the fairer sex: I thought my leisure hours could not be better bestowed, than on a translation of a work of so general utility.

Hasselquist's journey to *Egypt* and *Palestine* has very deservedly had the approbation of the nation, in its *English* dress; and confirmed the high opinion which the public

had before conceived of Profeſſor LINNÆUS and his pupils; and it may be hoped, this performance will recommend itſelf equally to the reader, from the uncommon variety of objects deſcribed, and the uſefulneſs of the author's remarks.

A WORD or two I muſt ſay in regard to the tranſlation, which is made from the *German*, and not from the original *Swediſh*; but as Mr. OSBECK not only reviſed the *German* tranſlation, but alſo made ſome additions to it which are not found in the original *Swediſh* edition, it is rather an advantage to the work than a prejudice. It was tranſlated into *German* by Mr. J. GODLIEB GEORGI, under the direction of Dr. DANIEL SCHREBER [a], who both underſtood the *Swediſh* language perfectly well, having ſtudied at *Upſal* for many years. The latter was a pupil and friend of LINNÆUS, and well known for many uſeful publications in œconomy, huſbandry, and natural

[a] Dr. *Schreber* has enriched this work with ſeveral remarks, which are marked at the end with D. S. and thoſe of the editor with an E.

hiſtory,

hiſtory, and particularly a botanical and œconomical deſcription of graſſes [b].

As I have met with great encouragement and generous aſſiſtance in the tranſlation of this work, from many gentlemen of great worth, whoſe names would be an ornament, was I permitted to mention them; I take this opportunity to acknowledge in a public manner the great obligations I feel myſelf under; and that the remembrance of them will not be obliterated, but will ever fill my heart with the warmeſt ſentiments of gratitude.

[b] The firſt part of this work, already publiſhed, contains twenty coloured plates, and twenty-ſeven different graſſes, with a large introduction to the ſtudy of this branch of botany: and very accurate deſcriptions of each kind, together with remarks on the cultivation, uſes, and ſoil proper for each ſpecies.

PREFACE

OF

Mr. OSBECK.

IN the year 1750 I was chosen by the *Swedish East India* company, to perform the functions of a chaplain to a ship going to the *East Indies*; that is, to read prayers in the morning and evening, to confess the people, to administer the Lord's supper, to catechise, to visit the sick, to bury the dead, and to preach on *Sundays* and Holidays.

So tedious a voyage required some amusement: during all intermissions from our ordi-

nary buſineſs. Every one choſe ſomething adapted to his taſte; for my part I found nothing that could entertain more innocently both myſelf during the voyage, and my friends after my return, than natural hiſtory.

The inſtruction I drew from the lectures which I had attended in this ſcience at *Upſal*, obliged me to be grateful. I returned without any money; more of which I could have employed during my voyage in the gratification of my thirſt after knowledge: for I knew that to ſo learned a man, as Linnæus, I could no how expreſs my obligations ſo well as by ſpecimens of natural hiſtory.

I kept for my own amuſement a journal of every thing worthy of obſervation during my voyage; from this I gave him ſome deſcriptions of new plants found in *Spain*, *China*, and other places, which were immediately incorporated into that capital botanical book then printing under the title of *Species Plantarum*, and with which my names of plants agree [c].

[c] The author's animals are alſo admitted into the *Syſtema Naturæ*, edit. 12; and where *Linn.* thought proper to alter the genus, his names are quoted as ſynonyms.

From

In his letters from time to time he put me in mind of publiſhing the account of my voyage; but I always oppoſed it, as believing that ſuch deſcriptions could only pleaſe naturaliſts, or lovers of natural hiſtory; but all my objections were ſurmounted by the advice of other learned men, and eſpecially by the order of a great perſonage, for whom I ſhall always retain the greateſt deference. The following ſheets however ought to be conſidered as written at firſt merely for my own amuſement.

During the courſe of our voyage, I obſerved the latitude at all opportunities, and have ſo deſcribed ſeveral fiſh and birds, that if they ſhould occur to others they may be known by them though they had never ſeen them before. Some which I have only ſeen at a diſtance, I have (till further examination) only mentioned under the name which the ſailors generally give them in the latitude, where they either ſtay for a ſeaſon or throughout the whole year. I have remarked ſwallows and other birds when they approached our ſhip, that by a variety of obſervations of that kind,

we may become better acquainted with the hiſtory of their migrations.

DURING my ſtay in *China* and other foreign places, I have been exceedingly attentive to the exterior aſpect of the inhabitants, their dreſs, cuſtoms, religion, manner of ſubſiſtance, trade, &c. but eſpecially to the condition of the country, the ſoil, the quadrupeds, amphibia, fiſh, birds, inſects; likewiſe the trees, herbs, plants, ſeeds, &c. of which I have brought a good many with me. Moſt new plants and other natural bodies I have deſcribed in Latin [d], that foreigners might likewiſe avail themſelves of theſe deſcriptions: but ſome few run in my mother tongue, on account of thoſe who underſtand no other. I have minuted the particular ſpot in which I found every plant, ſuch as plain, mountain, valley, whether in ſhade, &c. becauſe an ignorance of ſuch circumſtances frequently fruſtrates the labour and expence uſed in the cultivation of foreign plants.

[d] In the *German* tranſlation theſe deſcriptions are not in Latin, for which reaſon I have tranſlated them into *Engliſh*.

I HAVE

I HAVE ſhewn, that moſt foreign nations, and eſpecially the *Chineſe*, live for the greateſt part on fruits, roots, and plants, and that they cultivate ſuch plants in their marſhes, as will not ſucceed in other places: we might alſo find ſufficient proviſion among our own ſpontaneous plants. The *Chineſe* inſtruct their children in a religion both irrational and pagan, yet the principal objects of their education are morality and œconomy.

IN ſome places I have taken notice of things not uncommon in *Sweden*; which are however worthy of remark, becauſe they are found in ſuch diſtant climates, where every thing elſe is different: from hence we might at leaſt draw ſome uſeful concluſions.

WE are uſed to aſk what a thing is good for? And often raſhly think, that alone uſeful, which ſerves for medicine, cloaths, and food: as if the eye had no claim to its gratifications, and as if what is agreeable was not connected with what is uſeful. The dreſſes

and

and utenſils of diſtant countries are admired and carefully collected; why ſhould not then the works of the Creator deſerve at leaſt an equal degree of attention?

THE obſervations which I have made in ſeveral places, eſpecially ſuch as were much frequented, are ſhort and inartificial: and it will appear from my ſtile, in how languid a manner the pen performs its office amidſt the ſcorching heat of the *Chineſe* ſhores, where, to avoid the ſuſpicion of the people, I frequently wrote with my hand in my pocket, on a pocket book. Let every reader conſider my ſituation, and apply the caſe to himſelf. The hurry of the preſs has excluded ſome additions [c] which I intended to have made.

I ONLY wiſh that my obſervations may procure half as much approbation from the world, as they have coſt me trouble and attention. I ventured on ſhore at the iſland of *Java*, where the woods are filled with tigers and crocodiles; and hazarded my life in *China*; (where

[c] Theſe additions were inſerted by Mr. *Oſbeck* himſelf in the *German* tranſlation, which is here followed.

the heat of the ſun on barren hills, robbers on the roads, and petulant children in back ſtreets, are continually annoying a foreigner); and landed on the iſland of *Aſcenſion*, where the ſun hatches the eggs of the tortoiſes, and in a ſhort time ruins the conſtitution of the moſt healthy. On the whole, however, I have no reaſon to be ſorry for my voyage, from the kind reception with which the directors of the *Eaſt India* company have honoured me on my return: the ſame year they gave me leave to go on a ſecond voyage, which ſome intervening obſtacles obliged me to lay aſide.

I HAVE added the letters of the late chaplain of the Gothic Lion, Mr. *Toreen*, to my journal. This perſon died ſoon after his return from *Suratte*; but deſerves always to be remembered by his friends, on account of his learning and integrity. Other *Swedes* (deſirous of extending knowledge) are ready alſo to publiſh accounts of their travels, would but the affluent give encouragement to thoſe who endeavour to be uſeful to the public on their voyages, by promoting diſcoveries in natural hiſtory

hiſtory or œconomy. But for this purpoſe expenſive books are required, and money is very neceſſary for the voyage; on proper occaſions, I have expended not only my ſalary, but the voluntary contributions of my protectors, whoſe munificence will always make the deepeſt impreſſion on my mind.

Stockholme,
25th of *April*, 1757.

PETER OSBECK'S

VOYAGE to CHINA.

GOTHENBURGH.

North latitude, 57° 42′; and 6° west longitude from Upsal.

The year 1750.

November the 18th.

FROM Gothenburgh (where the Swedish East India company's ships are fitted out, and to which place they have always returned, ever since the year 1731, when they obtained the first charter for carrying on this

trade) I went to *Vargoe Hoala*, in very bad weather, the place where the Eaſt India ſhips uſually anchor, when *Riff* and *Feol*, and the other creeks in the Gothenburgh rocks, are filled with ice; by which means they avoid the inconvenience of ſawing the ice in order to clear their paſſage. The above place, which derives its name from the Iſle of *Vargoe*, or the *Iſle of Wolves*, is a Swediſh mile[a] and a half from Gothenburgh. I made this journey by land as far as *Hinſholm*, and there went on-board the *Prince Charles*, which was the firſt three-deck ſhip employed by Sweden in the Eaſt-India-trade. It was lately built at Stockholm, and its bulk was 390 tons; it was manned with 132 men, almoſt ready to ſet ſail, and bound for *Canton* in *China*.

Wood is much wanted in this country; and for this reaſon the pilots, and all the other iſlanders, are obliged to buy this commodity in town, where of late its price is greatly riſen; or to burn turf, which is dug in parallelopipeds, as it was formerly in *Holland*. In

[a] Eleven Swediſh miles make one degree; conſequently two miles are $12\frac{6}{10}$, or ſtill nearer $12\frac{7}{11}$ Engliſh miles. F.

this

this province turf was not common ſo early as 1670, ſo that the citizens of *Falkenbergh* and *Laholm* petitioned for the free importation of it, but were refuſed. In 1672, the town of *Laholm* obtained, that the turf dug in that diſtrict ſhould pay no duty. At preſent the turf is managed in Holland in a different manner from what it was before: which method the peaſants of *Fiaré* learnt only 30 years ſince from the inhabitants of *Salkenbergh* and *Wardbergh*; it is thus done. As ſoon as the farmer has ſown the ſummer corn, he goes to the turf-moor: the firſt comer takes the beſt place: ſeveral pariſhes divide a moor amongſt themſelves. They at firſt take off the green ſods, as far as the roots of heath and graſs reach: they then pour water upon the turf mould, and dig it out by little and little, till they reach a ſandy ſoil. In the middle of the moor they may dig a fathom deep, but not ſo deep on the ſides. The hole is made ſloping on two ſides, ſo that they may drive into it with a horſe and cart. The mud is then carried out of the hole upon the field, there ſpread with the ſpade to the thickneſs of three or four inches, and cut croſs-ways, ſo that it may be broken into quadrangular pieces. But thoſe

who desire to have their turf still harder, squeeze the mud, whilst soft, into round pieces resembling loaves, and let them dry in the fields, laying them close by one another. The turf which is grown a little harder is laid in heaps, yet so that the wind may pass through, and is sheltered from rain. In summer, the turf is carried home, put under a roof, and used in brewing, baking, boiling, and for warming rooms. The turf soil is either reddish, brown, or black, all which is equally good according to the account of the peasants; but they add, first, that the turf must never be mixed with sand, which increases its bad smell; secondly, it must not be mixed with clay, which hinders it from burning; and thirdly, it must be clear of all wood and great roots, because the ground about them is always very loose. They commonly find the best moors in large fields, because the roots moulder better there than in woods, and the water is more easily carried off. Often the best turf soil is found upon moors where heath grows. This plant is always to be met with in good turf-moors, where the wind blows freely, and where other plants are

mouldered

mouldered away [b]; as we find in Holland, and other countries, which are in want of woods, and where turf has been in use for a long time. Yet I know that the soil in such mosses or moors, where heath is not yet rooted, is used also for turf, especially where there is no choice. It has been observed, that turf-earth is a sort of soil produced from mouldered plants; and seems to consist chiefly of a mouldered, red moss, *Sphagnum palustre*, Linn. which in Westrogothia is called *hweetare Moss* (and from this probably the mosses, *Mossar*, take their name; which else are called *Myror*, perhaps from *Myror*, ants, or pismires, for they frequently are met with in this moss); I myself found this moss in a woody moor, every where at a fathom's depth, and always fresh.

[b] *Erica*, heath, never grows in turf moors before they are quite dry; for it cannot bear wet, and often perishes when the place where it grows is under water, as Dr. *Linnæus* has observed in his *Iter Scanicum*. But the *Erica myricæ folio hirsuta*, Bauh. pin. 485. grows in marshy mosses and moors; and I have found this variety of heath (which is uncommon in Germany) in Mecklenburgh, amongst the *ledum palustre*, or marsh cistus, and the *vaccinium uliginosum*, great bilberry bush. But in what manner the common smooth heath changes into this rough sort is unknown to me, and is worthy of farther enquiry. D. S.

December 6th, 61° 14′ N. L.

THE *Færoe* iſles, which we ſaw this morning, looked as gloomy as the weather of this ſeaſon. You ſcarce ſee any thing elſe than high mountains covered with ſnow, a cloudy ſky, and a roaring ſea. Theſe iſlands belong to Denmark, which provides them with corn; and the iſlanders, who are ſaid to be very induſtrious, re-pay it with ſtockings, waiſtcoats, gloves, quilts, and train-oil, &c.; for breeding of ſheep and fiſhing are their principal trades. It is ſaid, that they catch a great many *whales*; that they eat dry cod-fiſh inſtead of bread; and that they put their ſheep-tallow under ground, in order to uſe it afterwards as butter or oil.

December 9th, 60° 10′ N. L.

WE thought to have paſſed in the night-time, *Rochelle*, a ſmall iſland about the ſize of a ſhip.

Decem-

December 19th, 56° 42′ N. L.

Our ſeamen gave the name of *Northcaper* to a ſort of whale which is diſcovered by its throwing up the water; it is *Delphinus orca*, or the *Grampus*. The Daniſh miſſionary *Hans Egede* ſpeaks thus of it, in his treatiſe called *Gamle Greenlands nye perluſtration* (or a New Review of old Greenland): "The ſpecies of "whales called the Northcaper derives it's "name from the North Cape, in Norway, "where they are numerous; yet they are "likewiſe found about Iceland, Greenland, "and other countries; for they look for the "places where herrings and other ſmall fiſh "are in plenty, and often a ton of herrings "have been found in the ſtomach of ſuch a "whale. The Northcaper is very like the "*Balæna phyſalus*, or fin-fiſh, which being a "very nimble fiſh goes into the open ſea, as "if it were afraid of becoming a prey to its "enemies if it approached the coaſts. This "kind has a more ſolid fat, and its whalebone "is not ſo long and good as that of the for-"mer, and therefore is ſeldom purſued." For a further account, ſee Klein. Hiſt. Piſcium, Miſſ. II. p. 12. *Balæna Borealis, Northcaper.*

The year 1751.

January 1ſt, 36° 35′ N. L.

In the forenoon we ſaw *Cape Vincent*, a promontory in Spain. The ſhores appeared high and white, and the ever-green trees made the country look very fine.

January 4th.

The *Granate mountain* ſhewed itſelf to the right at a great diſtance, on account of its prodigious height.

The *Rock St. Pedro*, which was to the right, was quite freſh in our memories, on account of the ſhip called *Sweden*, which the crown of Sweden had deſigned for a preſent to the Turkiſh Emperor, but was loſt here in November 1738, when Captain Wagenfeld, was conducting her to Conſtantinople. Of the artillery which was recovered out of the water, ſix braſs cannon and a mortar are ſtill to be ſeen at Cadiz, all inſcribed with the name and arms of that moſt glorious King Charles

Charles the Twelfth and are kept there for the Swediſh ſervice.

WHITE *gulls* and *herring gulls (Larus canus et fuſcus)* were here in ſuch flights, as if they would diſpute with the fiſhermen about their right of fiſhing.

THE greater and leſſer *Porcos* are two rocks on the ſtarboard, at the entrance of the port of Cadiz: we happily paſſed by them. When the water is low, they are very conſpicuous; but when it is high, they are known by the breakers only.

ST. *Sebaſtian's* is a caſtle upon a little iſland near Cadiz, which, with two other caſtles, ſerve to defend this town.

THE *Gulf of Cadiz*, or the Road, is well known under the name of the Spaniſh-bay, where the ſhips of many nations yearly come, and where we likewiſe caſt anchor after a ſix weeks voyage, and having ſuffered a great ſtorm. After ſaluting, we were welcomed by ſeveral of our countrymen. We ſaw *Cadiz* and *Puerto real*, on the bay; *Puerto de Sancta Maria*

Maria directly oppoſite Cadiz, and *Rota* further on towards the ſea.

THE *Quarantine-boat* (or practic-boat, as the Swedes call it) was a ſloop covered with green, which was rowed by twelve men, and in it were two or three gentlemen of the college of health in Cadiz. After the ſloop had joined our veſſel, they aſked whence the ſhip came? what was her name, and that of her captain? how many men ſhe had? &c. The anſwers they received were written down upon paper. We likewiſe ſhewed them our ſhip's journal, and told them that they would find in it the name and manner of the death of a man that was killed by a fall. They took the journal with them on ſhore, in order to ſhew it to the college; but firſt ordered us to let none go out of the ſhip before they had obtained leave: for this reaſon we put a gooſe upon our fore-top-maſt, which is a ſign of a ſhip's keeping the quarantine.

January the 13th, and the following days.

I SAW on-board a Swediſh ſhip ſome orſelle, or oricelle *(Lichen roccella)*, a ſpecies of moſs

which grows upon the Canary Iſlands, eſpecially on Teneriff; and I was told that it ſold in Leghorn at two dollars copper coin [c] per pound, and that it was uſed to dye red with.

THE climate here is not very agreeable, for the heat obliges the inhabitants to keep within doors on the fineſt ſummer days, to ſleep during the day, and to go out at night. Without doors the heat is very diſagreeable; and from May to the middle of October they muſt ſuffer a great deal from gnats.

SEA plants are very ſcarce along the ſhores here, whereas the Swediſh ſhore has all ſorts of fuci, confervæ, &c. in plenty.

CADIZ *miol'ya* is a ſuburb without the city walls, where all travellers land that come to town by water. In this part are two columns of white marble, erected by the governor of the city during the reign of Philip the Fifth, as expreſſed in the inſcription. Beſides this, there is a watch-houſe for the ſoldiers, and a little cuſtom-houſe.

[c] About 11 d. Engliſh.

THERE

THERE are two gates in this approach, one for those that enter, and the other for those that go out. Both of them have draw-bridges, guarded with some soldiers; and about those are a number of lynx-eyed *visitors* (or custom-house officers) dressed in a sort of wide jackets, called *Casa guillas* in Spanish, which are used in this country as riding-coats. Under these coats they are said to have always a brace of loaded pistols, for their defence. The usual dress of their countrymen are these brown coats and flapping hats. They can make signs to one another through the gates if any thing happens; and they are obliged to look very strictly with regard to all unlawful importation or exportation, particularly that of money, which must pay somewhat *per cent.* Those that go out are visited with a strictness beyond description; as I once wanted to get out of the gate in great haste, with my pockets full of stones, it occasioned a suspicion in one of the visitors, who, in an earnest manner, put his hands into my pockets, and looking at me with a threatning countenance, searched every thing very carefully; but finding nothing but stones, he only smiled at my folly. To im-

port

port tobacco and snuff is capital, or at least the person who imports it is condemned to the gallies for life: but they except that which the Spaniards bring from their American colonies. A snuff-box therefore, if full of snuff, may occasion great trouble to the bearer.

CADIZ, or *Cadix*, or, as the English sometimes call it, *Cales*, is the principal sea-port in Spain; it contains a great number of inhabitants, is situated on the sea-shore of the province of Andalusia, at the extremity of an island, in 36 deg. 33 min. north latitude and 23 deg. 45 min. west longitude from Upsal. The city is surrounded with fine gardens and fortifications, and is said to have three hundred brass cannon [d].

[d] The origin and antiquities of this town are described by *Juan Baptista Suarez de Salazar*, in his *Antigüedades de la ciudad de Cadiz*, 1610, quarto, 317 pages; and afterwards in the *Emporio de el orbe, Cadiz illustrada, investigacion de sus antiguas grandezas, discursida en concurso de el general imperio de Espana por el R. P. F. Geronimo de la conception, religioso descalzo de el order de nuestra Senora de el Carmine, y gaditano de origen, que la dedica a la muy noble y muy leal ciudad de Cadiz*, Amsterd. fol. 1680, 663 pages: the price of it here at Cadiz is four pesos duros, that is, about seventeen shillings and six pence sterling.

THE

THE walls, and moſt of the houſes in this town, are made of a ſort of ſtone which they call *Selleria*, and which is

TOPHUS *particulis teſtaceis, argilla & arena coadunatus*, or a mixture of ſhells, clay, and ſand. It is ſaid that the before mentioned rocks *Porcos* conſiſt of this ſtone. It is broken on the ſea-ſhore and carried from the *miol'ya* (when the tide is low) in high carts to the town; and thoſe pieces which are too heavy to be put into the cart are faſtened with ropes below it. The ſtone is ſoft in cutting, and therefore very proper to build with, as it hardens by time. The inner terras of the wall, to which a ſtaircaſe leads on the right hand ſide of the gates, is covered with Dutch clinkers [c], and as broad and even as the fineſt road. From thence you ſurvey with pleaſure (over the outward part of the wall, which is about four feet higher and very narrow) the ſhips riding at anchor, going out and coming in: among the firſt, is the ſilver-fleet. Towards the city you behold a ſtreet where ſalads,

[c] Clinkers are a ſpecies of Dutch bricks.

roots,

roots, and all ſorts of fruits, are expoſed for ſale, winter and ſummer.

THE Spaniards make ropes and cables, for ſhips and other uſes, of a certain graſs which they call *Sparto*. This is the *Stipa tenaciſſima*, Linn. or *Spartum herba Plinii*, Cluſ. Hiſt. 2. p. 220. which is ſaid to grow in wet places [f]. The ropes they make of it are ſo durable, that they need not be tarred; but the Spaniards dry and ſpin it without preparation, contrary to what we are uſed to do with our hemp. This might, perhaps, furniſh hints to us to look out for ſome of our own wild graſſes in order to employ them in the ſame manner, and we might make a beginning with the *Elymus arenarius*. The Spaniſh mats which are brought to Sweden are made of the ſame *Sparto*.

OLIVE trees *(Olea Europæa)* and white poplars *(Populus alba)* are planted on both ſides the ramparts, and are watered by ſubterraneous pipes. Thus the city has the ad-

[f] Linnæus in his Species Plantarum, and Loefling in his Journey through Spain ſay it grows on the ſandy hills of Spain.

vantage

vantage of a garden's being within her walls; and therefore every one, if he chooſes, can at once enjoy the pleaſure of living in town and country. The road which goes further on will ſoon be adorned in the ſame manner. The ramparts were, in all other places, of an equal breadth, and covered with ſand, which makes it very eaſy walking round the town.

On the ramparts, and even in other places, wooden croſſes were erected.

The beggars were every where crying, *Una limoneta por el amor de Dios y por las benditas almas à eſte pobre,* or ſome ſuch other petition for God's or for the Saints' ſakes.

The ſoldiers upon the ramparts diverted themſelves with fiſhing, when the tide was in. My deſire of contemplating their art a little nearer was fruſtrated; as I experienced now, and at other times, that foreigners are not permitted to ſtand ſtill upon the ramparts, to look about them.

The country ſide has ſtill higher walls; and its ditches, ramparts, and batteries, are more curious

curious than I can deſcribe, and are daily improving.

THE market near the above mentioned ſea gate, as well as a ſtreet on the right hand of it along the high walk, are always well provided with victuals in bags, &c. and every perſon cries what he has to ſell; thus, one cries *Caſtanas calientas y cocidas*, boiled warm cheſnuts; another has a mug of water upon his back and a glaſs in his hand, and cries *Agua del Puerto*, water from Port St. Mary.

FISH, in particular ſalted ſea-fiſh, were ſold in vaſt quantities in this market; and I heard them cry more than thirty different ſorts.

THE houſes, as well private as public, are built of the above mentioned ſtone (*Tophus*), and ſometimes of limeſtone. They are generally two or three ſtories high, and have balconies which have no windows, except in the houſes of people of quality, and are provided, inſtead of them, with two ſhutters, which are opened when you want to let in the day-light, or to look at the great crowd of people paſſing by. On theſe balconies they put their ſtone

water-jugs, in which the water uſed in the houſe keeps beſt.

Flower-pots, with rue, roſemarys, &c. are likewiſe ranged in the ſame place. The houſes of the people of condition are built round a ſquare: at the ſecond ſtory on the inſide, a gallery goes quite round, except on one ſide, where they uſually have a little garden, out of which the *Paſſiflora cœrulea* creeps over the ſecond-ſtory windows; where, upon particular ſtands, are ſeen cypreſſes (*Cupreſſus ſempervirens*), *Capſicum fruteſcens*, lemon and orange trees, &c. which are likewiſe to be found below in the little gardens.

The rooms are very high, white waſhed, and without tapeſtry or painting, but generally ornamented with portraits and gilt furniture.

They keep the ſpecies of parrot called *Pſittacus garrulus*, canary birds (*Fringilla Canaria*), red-legged partridges (*Tetrao rufus*),

s We bought ſuch pots with flowers, to put upon the deck, for three pieces of eight each.

Loxia

Loxia violacea, and cardinal birds (*Loxia cardinalis*), which latter were ſaid to eat the above mentioned *Capſicum fruteſcens*.

Stoves and chimnies are as much unknown in this country as froſt and ſnow.

Floors and roofs are made of bricks and tiles. The former are covered with mats made of *Sparto*[h]. The rafters, laths, and tiles or ſlates of the roof are by no means concealed, and are rather diſadvantageous to the beauty of the houſe, was this mode not in ſome meaſure juſtified by the uſe reſulting from it, and did it not increaſe the height of the rooms.

The roofs are flat, and it is very agreeable walking upon them. They are moſt commonly adorned with flower-pots on the ſides, which make them look like gardens; in the pots are queen's ſtock-july-flowers (*Cheiranthus incanus*); but where theſe are wanting, their places are ſupplied by maple-leaved blite (*Chenopodium hybridum*), chick-weed (*Alſine media*), common ſow-thiſtle (*Sonchus oleraceus*); and beſides this *Parietaria Lu-*

[h] See page 15.

ſitanica. Where the water gathers on the roofs, *Bryum murale* and navel-wort (*Cotyledon umbilicus*) are found; and on dry walls *Lichen parietinus.*

Towers without ſpires are put upon ſeveral roofs: they have four ſides, a height of ſome yards, and command a fine view of the town and the ſhips.

In the houſes of conſuls, the colours are hoiſted upon ſuch towers at the arrival of ſhips.

The doors are high, commonly folding ones, and in the inner apartments often without locks.

The gates are ſhut in the houſes of people of rank, with a latch on the inſide without any handle; but on the outſide is a little bell: when this is pulled, the porter opens the gate from the balcony by a ſtring, which pulls up the latch, and thus opens one half of the gates, which ſhuts of itſelf, by means of weights, as ſoon as the porter lets go the ſtring. But if any one comes in the night-time,

time, the porter muſt go down to open the gates, leſt ſome diſagreeable gueſts ſhould ſlip in.

In the lowermoſt floor are the ſtables.

They uſe little caution againſt fire, for the coachmen go into the ſtables with torches; yet this accident ſeldom happens in Cadiz, as all the houſes are built with ſtone.

Oil is uſed in lamps, inſtead of candles; and likewiſe in dreſſing meat oil is employed inſtead of butter.

Their yards are paved, ſome with flags of *Tophus*, and ſome with flags of *Talcum*.

Some have wells in their yards; but the water is not fit to drink, and muſt therefore be uſed for other purpoſes in houſe-keeping.

The ſtreets are paved with round pebbles, and have a channel in the middle filled with ſhells of fiſh, peels of fruit, or the like; which, putrifying by the heat, occaſion a diſagreeable ſmell in many places.

THE inhabitants are tawny, from the heat of the ſun; moſt of them have long but narrow heads, great ears and eyes, black eyebrows and hair. They are lively, and have an eaſy carriage.

A GREAT mixture of other European nations is to be met with here; and beſides theſe, they have negroes who ſerve in the kitchens.

THEIR language is very expreſſive, for they accompany their words with motions of the head, ſhoulders, and arms[1]. The officers, as well as common ſoldiers, are reckoned very civil to foreigners: but the ſeamen are continually curſing and ſwearing; and when they meet each other in their boats, it is their common ſalutation.

THE dreſs of the men is very commodious, for if they do not dreſs ſumptuouſly, they cover their heads with a linen cap, and above that they put a flapped hat, round which they faſten a ribband with a little buckle, and tie

[1] Theſe geſtures rather imply the contrary.

it

it to the head with another below the chin, ſo that the wind may not blow it off. They uſe no cravats. The reſt of their dreſs is a waiſtcoat, the ſleeves of which are open before, and the cuffs ſmall, like thoſe worn by the Pruſſian ſoldiers.

Over theſe they put on a long wide jacket, which is commonly of a black or brown colour: they wear linen ſtockings, and under them linen ſocks, and ſhoes with low quarters and heels, though the dirty ſtreets ſeem to require higher. They carry two handkerchiefs about them, a coloured one to wipe off the ſweat, and a white one. I ſometimes ſaw young people walking with muffs, though it was then as warm here as it is in Sweden in ſummer-time. Gold-laced cloaths are as ſcarce with the quality as with the poor. People of rank carry ſticks (which are ſaid to be particular badges of honour) when they are not dreſſed. Some who have ſurvived heavy diſeaſes, or have eſcaped great misfortunes, wear, agreeable to their vows, no other than grey cloaths.

The ladies wear their own hair, either in long and broad treſſes, or ſhort with a toupee

and an aigrette, or tied up at top as the Swediſh country girls do. Hoops are not uſual here. They wear a ſort of hood, which ſits very cloſe; this they put over their heads when they are in the ſtreets, but throw it back when they are in their houſes: two ſtraps, of a hand's breadth, hang down from it to the feet. If they go to church, a roſary, or paternoſter, and a fan, are neceſſary to their dreſs.

The Swediſh Conſul, Mr. Jacob Bellman, is honoured and beloved by every one, on account of his obliging behaviour. At the gate of his houſe, oppoſite to the entrance, the Swediſh arms are put up: in his rooms were the portraits of the late King of Sweden, Frederic, of the preſent King and Queen, and of the Hereditary Prince Guſtavus.

Churches, chapels, convents, and hoſpitals, are all very fine. The church of white marble, which is not yet finiſhed, and to the building of which the town pays a certain ſum yearly, is the fineſt and largeſt of them all. The ſubterraneous vaults below this church are almoſt as large as the entire ſtructure of the other churches, and ſome corpſes have already

ready been depoſited in them; they are ſaid to be quite finiſhed; but the walls of the church are not raiſed to the height intended; and yet candles are continually burning in it for its patron St. *Francis Xavier*, who ſuffered martyrdom from the heathens for preaching the goſpel in Japan, and is ſaid to have wrought as many miracles as there are wax tapers burning round his image; to which the inhabitants pull off their hats whenever they paſs by.

WAX tapers are burning in the churches day and night. At the entrance is *Agua bendita*, or holy water, in a diſh or veſſel, into which they dip their fingers, and croſs themſelves when they go in and out. The church pavement is every where covered with matts; upon which men and women, of all ranks, kneel down for want of ſeats.

THE bells are always ringing, but not ſo as with us; for they make a noiſe almoſt all day, firſt in one ſteeple, then in another, then in all together, for prayers, or maſs, on account of lightning, or the dead: the latter is always in the evening, for their maſſes for the dead are kept about that time.

ROSARIO,

Rosario, or a rosary, is necessary to both sexes, to regulate the number of their prayers; it consists of a fine silver or brass chain, with glass or coral beads, or pearls, &c. and a cross, from which hang two or three medals, with the images of saints, which are much valued.

Crossing is performed with the thumb, before and after church service, or prayers, three times: viz. upon the forehead, mouth, and breast, so that nothing may befall their eyes, mouth, or heart; which is the more necessary, as the cross, according to their catechism, is the principal mark of a Christian.

They marry very young; and a boy of fourteen years may marry a girl of twelve.

Their burials differ from ours in many things: before the corpse a cross with lanthorns is carried; as soon as it is deposited in the grave, some quick-lime is thrown in along with it. In the evening a mass is read for the dead, and the organ is played, though none but the living are the better for it. Their burying-grounds are out of the town; but they suffer

ſuffer no proteſtant to lie in their church-yards.

The proceſſions might almoſt be conſidered as funerals by ſtrangers: they conſiſt of a number of people of high and low rank, who follow a croſs through the town, accompanied by many lanthorns, and ſinging the *Te Deum* and *Litany*. Theſe proceſſions are fixed to certain days; as the 2d of February, the 25th of March, the 15th of Auguſt, the 8th of September, and the 8th of December; and beſides theſe, they have others on certain ſaints days, and when meat is to be gathered for the priſoners; and then they take kettles, diſhes, pots, &c. with them. If they meet with ſuch a proceſſion, the people ſtand ſtill, take off their hats, and fall on their knees, though the ſtreets be ever ſo dirty. They have the liberty of making themſelves merry three days before Lent; and then they throw carraway comfits at the people who paſs by, with other things much more diſagreeable.

The ſchools have maſters and uſhers, who teach children the firſt principles of religion, and the form of the maſs, which they inſtruct them to mumble all together.

They

They ſeldom teach any other than their own language; and it is ſaid, that, beſides the Jeſuits, there are but few who underſtand Latin, and thoſe make uſe of a particular pronunciation; thus, for *mihi* they ſay *micki*. The Hebrew language and the Jews are equally in diſgrace with the Spaniards, and therefore are both excluded from the colleges.

The Spaniſh poetry is greatly eſteemed, particularly the works of *Quevedo* are praiſed beyond meaſure; comedies in verſe are frequently printed and acted, and the reading of them is the principal amuſement of many people. The ſtate of the ſciences in Spain is beſt repreſented by the learned Spaniſh Benedictine friar *Geronimo Fejoo*, in his *Cartas Eruditas*, or Learned Letters, 1750, Tom. III. carta xxxi. p. 384.[k]

Here are ſeveral bookſellers ſhops, in which may be procured Spaniſh books on religion, printed on a wretched paper, bound in ſoft paſteboard, with leathern ſtraps inſtead of

[k] In the original is a long quotation from Fejoo's book, which the tranſlator does not think intereſting to an Engliſh reader.

claſps;

claſps; as alſo ſome few French well-bound books, on natural hiſtory, phyſic, hiſtory, &c. Old books are expoſed for ſale, in the market and in other places, upon tables.

None but eccleſiaſticks are permited to read the Bible, and the Inquiſition is very ſtrict in this article. For this reaſon it is only ſold in Latin; and as the Spaniards ſeldom trouble themſelves about any but their own language, this order is very ſeldom diſobeyed.

Their catechiſm, or, as it is called, *Doctrina Chriſtiana*, is very ſhort. The firſt queſtion is, What is the ſign of a Chriſtian? anſwer, Croſſing; of which we have given an account above. In this catechiſm, ſeven ſacraments are mentioned, baptiſm, confirmation, penance, communion, extreme unction, orders, and matrimony; and it is obſerved, that the five firſt are abſolutely neceſſary.

Works of mercy are fourteen, among which one is the giving alms to ſtrangers. It likewiſe mentions ſeven *Peccados Capitales*, or capital ſins, and as many virtues:

1. Pride.
2. Luxury.
3. Avarice.

3. Avarice.
4. Anger.
5. Intemperance.
6. Envy.
7. Lazineſs.

Virtues are,
1. Humility.
2. Chaſtity.
3. Charity.
4. Patience.
5. Temperance.
6. Benevolence.
7. Induſtry.

In order to learn the Spaniſh language, there is no better Dictionary than that of *Sobrino*, which was publiſhed in the year 1744, in two volumes in quarto. The Grammar and Dialogues of Sobrino are alſo of great uſe [1].

[1] In this place, Mr. Oſbeck inſerts, for the uſe of his countrymen, the Spaniſh alphabet, with the pronunciation of the letters; but as the great commercial connections of this country make all European languages more common among the Engliſh, and many grammars and teachers of the Spaniſh langnage are to be procured, it is entirely unneceſſary to inſert an alphabet which the author had made with a view to be beneficial to his countrymen only. F.

No proteſtant book is permitted to be brought into the city before the inquiſitors have peruſed it.

To avoid this inconvenience, I did not venture to take any books on-ſhore, though I often wanted them, in particular ſuch as treated of natural hiſtory.

THEIR diſhes are ſometimes very peculiar, on account of the many ſpecies of fiſh, fruit, and roots, which are unknown to us.

I HAVE ſeen no rye bread, and much leſs any of inferior quality; it is chiefly made in the Spaniſh or French manner. The latter, which is here made of Engliſh wheat, is well known to us. Great drought often occaſions a bad crop, which was the caſe the year before I arrived.

THEIR ſugar-bread, which is equal in taſte to the French biſcuit, is called *Viſocho* in Spaniſh, and is dipt into wine at table. They have likewiſe a ſort of ſugar-bread in Spain, which is like ginger-bread; it is gilt at top, and made of water melons, called *Calabaſſa*.

Nobody

Nobody is permitted to eat flesh in Lent, except the sick, who may obtain a dispensation for a certain fee. Cow beef is reckoned best in this country, because the cows are seldom milked; but in their stead goats, sheep, and asses. We bought two oxen for our ship; their flesh was exceedingly dry, occasioned both by the larvas of the gad-fly which nestle in their skins about this time, and by the want of good pastures; for our fine Swedish grass is much wanted here, and in its stead the pastures are covered with thistles, and other prickly plants, which I shall mention in another place.

Sovaja is a sort of corn which is sown in the inclosures of the town, not for the use of men, but only for the cattle. They sold it to us in bundles, whilst it was green, and had no ears, which do not appear till March.

Bees are here in great estimation, or else the Spanish proverb could not take place:

Abeja y oveja,
Y piedra que traveja,
Y pendola trans oreja,
Y parte en la Igreja,
Desea a su hijo, la vieja.

The

THE beſt wiſhes of a mother to her ſon are, bees, ſheep, mill-ſtones, a pen behind the ear, and a place in the church.

POT-HERBS *(Plantæ oleraceæ)* are ſown both within and out of the town; as purſlane, ſpinage, and onions. The gardens are incloſed with walls, on which the *Agave Americana* is planted inſtead of a hedge; but where this is not to be had, the prickly glaſſwort *(Salſola Kali* Linn.) or a hedge of twigs twiſted together becomes the fence. *Origanum Creticum*, Spaniſh *Oregano*, known by the name of Spaniſh hops, is uſed to make anchovies and other meats more palatable[m]; and for that reaſon, it was bought up very much in the apothecaries ſhops, where there is plenty of it to be had.

ROSEMARY, which we reckon among the ornaments of our green-houſes, is carried for ſale by whole cart-loads.

SWEET or China oranges, and other fruit, are daily eaten after meals, and likewiſe at

[m] I was told that this ſort of ſpice ſold well in China.

other times; and that they may not occaſion ſickneſs, they uſe bread with them. It is no ſmall advantage (at leaſt to a Swede it appears ſo) to be able to take one's amuſement all the winter-long in the gardens, and to pluck there the moſt delicious fruits; but, to balance theſe bleſſings of a genial climate, there is not one good draught of water in all the town, as it muſt all be brought from *Port Mary* in boats, or carried by aſſes, and is afterwards preſerved in great ſtone jugs. This water-trade pays its merchants very well, for, if I remember right, each boat that fetched water at the abovementioned place gained about forty Swediſh dollars ſilver coin (that is nearly 50 ſhillings): the paſſage is eaſily made in 24 hours, in caſe they go with the tide, and return with it.

Wine of Xeres [n] is the beſt and moſt common ſort, which is made in a little town near Port St. Mary, called *Xerez de la Fronteras*, and derives its name from it. As our Eaſt India ſhips ſail from their own port with but a ſmall ſtore of wine, they generally take in at Cadiz a proper quantity of Sherry for the

[n] Our Sherris or Sherry.

whole

whole voyage and return; becauſe this wine is ſtrong, and preſerves its goodneſs in all climates. A quarter of a caſk, containing from ten to eleven gallons, coſts forty Swediſh dollars ſilver, or nearly fifty ſhillings ſterling. *Tinto* or *Rota* wine is reckoned leſs wholeſome than the white, and is therefore cheaper. Raiſins are alſo bought here, and ſold in China with great profit.

Spanish brandy is very ſtrong, and may be uſed as ſpirit of wine. We gave it every morning to the men, mixed with two-thirds of water, and it was uſed in the punch which we had twice a week at dinner. Beſides this, the captain uſually cheared the ſailors in a ſtorm with punch or brandy.

The people drink chocolate here in the morning, and ſometimes in the afternoon inſtead of tea. The following is the manner of making chocolate: the chocolate nuts (*Theobroma cacao* Linn.) are dried and rubbed into a ſoft paſte on a flat ſtone, and ſome cinnamon is added during the rubbing. This paſte is made into proper forms, ſo that the chocolate-cakes reſemble the ſhape of bricks. Such a

piece of chocolate weighs one pound. If chocolate is to be made for drinking, you take ſuch a piece to ten diſhes of water; it is broken, and whilſt it is boiling it is ſtirred with a ladle, the thickeſt end of which comes to the bottom of the chocolate-pot which it fills. At each filling of a diſh, they ſtir it over again. It is probable that the manner of preparing it is the reaſon why it has a better taſte here than in Sweden, though they do not mix the vanilla (*Epidendrum vanilla* Linn.), a very precious American fruit, with it. I never ſaw tea or coffee drank here.

The tradeſmen are Frenchmen, Engliſhmen, or Italians, who work pretty well, but demand exhorbitant prices. Cloth and ſtuff are generally imported by the French, Engliſh, and Italian merchants.

The Exchange was kept in a broad ſtreet called *Calla nueva*, or New-ſtreet, cloſe to the market. During the time that the merchants are aſſembled in it, the opening of the ſtreet towards the market is ſhut up by a bar, as is uſual at our cuſtom-houſes.

The

The Spaniſh pine-tree, (*Pinus pinea*) the olive-tree, and, as it is ſaid, the cork-tree (*Quercus Suber* Linn.), are all ſold for fuel by weight.

The Spaniſh weights are accurately deſcribed in the Memoirs of the Swediſh Academy of Sciences, 1746, p. 279. and afterwards both the meaſures and weights in the ſame Memoirs, 1755, p. 180.

The quantity of ſpecie which circulates here is rather aſtoniſhing to a Swede.

It is ſaid that ſome people carry a good deal of this out of the kingdom; and even the Spaniards themſelves ſend great ſums to the Eaſt Indies, and other places. If any one carries a ſum of money out of town, and is diſcovered, he not only loſes his money, but is ſent to priſon, and alſo ſuffers other puniſhments.

The people of this country do not make uſe of horſes for carriages or any other purpoſe; when an inhabitant of Cadiz goes out of town,

he puts on a wide jacket, or *Caſſaquilla*, and wears neither coat nor boots, though both would be very neceſſary. He makes uſe of wooden ſtirrups, which have ſome likeneſs to a ſmoothing-iron without a cover; he puts his feet into them, and they not only ſerve as a ſupport to him, but likewiſe as a caſe for his ſhoes, to keep off the dirt.

Mules (*Equus aſinus mulus* Linn.), called *Mulo* and *Mula* by the Spaniards, draw their carriages, but they move very ſlowly. Their coaches have no ſeat for the coachman, ſo he is forced to ride on one of the mules. She-mules do not propagate their ſpecies, at leaſt ſuch inſtances are very ſcarce. They are the offſpring of a mare and an he-aſs, or of a mare and a mule. The common people believe that the ſterility of the ſhe-mule is in conſequence of a curſe laid upon it by the Virgin Mary at the birth of our Saviour, becauſe it had eaten the hay which the ox had collected together. Their common food is cut-ſtraw with corn.

The aſs (*Equus aſinus*) is leſs than the leaſt horſe, and is very common in Spain, both in towns and in the country. The he-aſs is called

called *Vurro*, and the ſhe-aſs *Vurra*, which is read as *Burro* and *Burra*. *Burrico* is the diminutive of this word, and denotes a little aſs, whence the Swediſh name *Borica* is derived. They are lean, and aſh-coloured, but grow blackiſh after being ſhorn. They are fed like horſes with cut-ſtraw, but they likewiſe content themſelves with what they find in the ſtreets or road. When they come to market, their diſagreeable braying even drowns the noiſe of the crowd. They are uſed to all ſorts of work, except drawing a cart, which is never done but on the ſea-ſhore, from whence they carry ſtones to town: ſand, ſtraw, ſtreet-dirt, in ſhort every thing that is to be removed from one place to another, is loaded upon the backs of aſſes in panniers, made of mats, and open at top. But if they carry water or milk, they have ſaddles made of oaken planks, on which the caſks are laid on both ſides. When you have aſſes, you want no bridles to them; for as ſoon as the aſs-driver cries out *Are* or *Araci*, all thoſe which have ſtrayed out of the road turn in again. Many hundreds of theſe animals were at the country-gate of Cadiz, whither they brought ſand to make the ground even on the outſide of the ditches, not to mention all thoſe which are to be met

with in every part of the town. Their hoofs are never ſhoed, though aſſes are uſed like ſaddle-horſes at the poſt-ſtations; but this kind of poſting is very diſagreeable to thoſe who are not uſed to it, from the ſlowneſs of their motion.

People of all ages ſmoak tobacco, though it is (as well as ſnuff) very dear. It is ſeldom ſmoaked in pipes, but either in leaves rolled together, called *Cigarro* by the Spaniards, or the tobacco which comes in packs is wrapt up in paper, and this ſerves inſtead of pipes. The beſt Spaniſh ſnuff comes from Seville, and they generally put it into ſnuff-boxes of olive-wood, which are very pretty.

It is very agreeable walking before the gate towards the country, becauſe you are not peſtered there with cuſtom-houſe officers, and only meet with a few civil centinels, who ſhew the way to ſtrangers if they happen to miſs it. The high-road is very magnificent, and has ſtone benches on both ſides. The throwing of bombs into the air, and ſome other diverſions of the ſame kind, attract a good many people hither, who repoſe themſelves on theſe benches. In other places the high-road

high-road is not ſo grand. Travelling is much more inconvenient and expenſive here than in Sweden, on account of the delays and bad accommodation. Travellers always carry fire-arms and piſtols with them, and ſeem as if they were marching to a campaign; for they have reaſon to be afraid of robbers, which, though leſs frequent farther in the kingdom, are often met with in Andaluſia; whence the Spaniſh proverb,

De el Andaluz guarda tu capuz;
Al Andaluz haze la cruz:
Al Sevillano con una y otra mano:
Al Corduves con manos y piés.

Take care of thy head before an Andaluſian, and ſign thyſelf with a croſs; before a Sevilian croſs thyſelf with both hands; and before a Cordubian with hands and feet.

I FOUND neither animals of prey nor ſnakes; but I met a perſon having a long lizard, exceeding a foot in length, of green, yellow, and other colours, on a ſtring. It was very ſpiteful, and when it was let down upon the ground, it opened its mouth at all who paſſed by it, eſpecially if a ſtick was held near it.

it. The man who carried it ſaid he could ſell it to the apothecaries.

Euphorbia *Paralias*, a kind of *ſpurge*, was to be met with in the ſandy grounds near the ſea-ſhore, where the waves of the ſea often reached. It was at that time without fructification.

Spartium *monoſpermum*, which the Spaniards call *Retamas*, grows like willow buſhes along the ſea-ſhore as far as the flying ſands reach. This plant was particularly plentiful in the peninſula on which Cadiz ſtands, which is covered with a fine white ſand, and where, beſides this, ſcarce any other plant grows, except the *Ononis repens*, or creeping reſtharrow. The *Retamas* ſometimes grows to the thickneſs of a man's arm; its bark is aſh-coloured, the numerous branches are all green; its leaves ſhine like ſilk; the freſh leaves are lanceolated, but the old ones are more obtuſe, a little ſplit at top, and reflected: the flowers are innumerable, ſmall, white, and have red *Calices*. The uſe of this plant is very great in ſtopping the progreſs of the flying ſand. The leaves and young branches of it are very delicious

delicious food for goats, but I have not obſerved that they touch the bark. It turns the moſt barren place into a fine odoriferous garden by its flowers, which laſt a long while. The twigs are uſed for tying bundles, inſtead of ruſhes; and all kinds of herbs which are brought to market are faſtened together with them. The whole ſhrub ſerves to ſhelter hogs and goats againſt the ſcorching heat of the ſun.

SWINE are kept in whole herds by a man who feeds them with acorns, which are commonly ſold at Cadiz and at other places. The ſwine are very large, thin haired, and black as jet. It is probable they came originally from Africa, as I am told that this ſort of hogs is very ſcarce higher up in the country. It would be worth while for an œconomiſt to get a breed of theſe ſwine; but they muſt alſo be fed as they are here, and have ſome exerciſe every day, which keeps them from growing too fat °, and makes them taſte well. The exportation of a boar of this kind is forbidden, but a ſow almoſt ready to farrow

° In England no man tries to prevent his hogs from growing too fat.

would

would be ſtill better for the propagation of this kind of hogs. We bought a good many of theſe ſwine for our ſhip; and every Saturday we killed one of them, and had broth called *Puspas* boiled from part of it.

In the ſame iſland were ſome little gardens, and in the midſt of them here and there a palm-tree (*Phœnix dactylifera*) which gave them a fine appearance.

January the 23d, and the following days.

Puerto *de Sancta Maria*, which our ſailors called *Port St. Mary*, is a little unfortified ſea-port, about three quarters of a Swediſh mile from Cadiz. I went this day to that place; It is ſituated in a plain, not far from the mouth of a river. If you go up this river, the town is on your left hand, and on the right a ſmall iſland, whoſe ſituation is low, and which is covered with ſhrubs, among which the *Nerium oleander*, called *Yerva mala*, or the noxious plant, by the Spaniards, grew in the ſand near the water.

On

On our arrival we were met by the cuſtom-houſe officers, who came to us, with loaded fire-arms, in a boat. We afterwards went in ſmaller boats into more ſhallow water, where we found a good many fellows who offered to carry the people on ſhore for ſome ſmall matter, and they did it very cleverly. For the ſame purpoſe aſſes and horſes were kept in readineſs. Though the city is leſs than Cadiz, yet its ſtreets are finer; all the private and public houſes are of ſtone, the ſame as in Cadiz, but leſs. Some of them were not yet rebuilt ſince the plundering of this place by the Engliſh. In a monaſtery of this town I ſaw ſeveral repoſitories full of relicks, but I ſuppoſe my readers will pardon my omitting to enumerate them. The houſes were ornamented with pots, in which were roſemary, carnations, and other odoriferous plants, in full bloſſom; but the *Sempervivum arboreum* had no flowers as yet. Where theſe ornaments were wanting, Flora herſelf had ſupplied the bare walls with *Bryum murale* and *Lichen parietinus*; and beſides theſe, in ſome places with *Cotyledon umbilicus*, or navelwort, whoſe leaves grew between every little cleft, the *Mercurialis annua*, or French mercury, and *Parietaria Luſitanica*. The old ruined

walls were quite yellow with the *Sisymbrium Irio*, and with the *Senecio communis* or common groundsel. This town has good fresh water, in such plenty, that, besides its own inhabitants, it supplies Cadiz and the ships in that port. This water is reckoned the best in this country, wherefore in Cadiz they cry *Agua del Puerto*. I am told that it is brought a quarter of a Swedish mile by subterraneous canals to this place. There are several houses in this town from whence the water may be fetched; one in particular was built for that purpose on the river side, during the reign of King Philip V. The ship-boats come thither and fetch fresh water, without loss of time, because they open the water-canal for a very small matter. The other house is an English inn, where all the strangers generally lodge.

The leaves of the samphire (*Crithmum maritimum*), pickled in vinegar [p], are eaten here and in Cadiz with roasted meat. This juicy plant grows on the coasts of England, and perhaps on those of Spain, but not in this

[p] The manner of pickling this, and all the like salt and juicy plants, as is usual in England, is described by Mr. Professor *Kalm*, in his Voyage to North America, Vol. II. p. 97. of the Swedish edition. *Dr. Schrebir.*

place;

place: it is not found in Sweden; but we have other juicy plants, such as (*Salicornia Europæa*) marsh samphire, or jointed glasswort.

The country hereabouts was already beautified with many flowers. Dwarf-mallow (*Malva rotundifolia*), with large red flowers, grew both about the houses and out of town, and was greedily eaten by hogs and oxen; but they always passed by the sunspurge (*Euphorbia helioscopia*), and would rather eat the *Carduus Syriacus*, the white spotted leaves of which, though they ornament the fields, I think, afford but a poor food.

The cow-herds go with long sticks, like the Polish bear-keepers. All the Spanish shores are mountainous, except in this place. The soil also varies much. On the sea-shore you find during low water a blue clay, and near it a fine white sand, which covers the country here and there at a little distance from the sea. It often looks like large hills of snow, where pine woods or other plants hinder it from flying. Higher up from the sea, you find a mould mixed with sand and pebbles, sometimes of a red, and sometimes of another colour.

In

In the vallies is sometimes a sky blue or other clay, the same as in their wheat-fields.

The plants on the sea-shore were very few; *Spartium monospermum* and *Juncus acutus* were but just sprung up from the ground. A little farther from the water grew *Schœnus mucronatus involucri foliis scapo longioribus*. Still further off began the woods of the *Pinus pinea*, which hindered the sand from spreading any further. In these woods I found the restharrow (*Ononis*); there grew likewise queen's stock july-flowers (*Cheiranthus incanus*), broad-leaved mouse-ear chickweed (*Cerastium viscosum*), *Lotus cytisoides*, and *Crepis barbata*. The latter was in blossom; the stock-july-flower just began to flower at my departure; but the restharrow had no appearance of flowering at that season.

Some insects are found in this sand; in particular, *Scarabæus sacer*, *lævis*, *thorace inermi*.

Gardens or plantations take up a great part of the fields; and they contain lemon, orange, almond, and olive trees, which turn to a considerable profit to the owners.

The

The lemon tree, the Seville and sweet orange trees, are much akin to one another, and are generally planted promiscuously [q]. The sweet smell of their flowers would almost revive a person when half dead. The fruit ripens so slowly, that the whole year is spent before it comes to perfection. It is said by some nursery-men, that they can produce fruits of which one quarter is Seville, the second sweet orange, the third quarter sweet, and the fourth four lemons.

Sovaja was sown in some places amongst the trees; sometimes parts of the plantations were sown with salads, radishes, onions, &c.

The *Phœnix dactylifera* [r] is seldom to be met with here: there were some near the monastery, almost as high as the house itself, the dates of which were fallen down, and were of the colour and size of white plumbs. The

[q] In the Linnæan System they are all included in one Genus, viz. *Citrus*.

[r] This is the Date-palm. There are two such in the Governor's garden at Gibraltar forty-five feet high, and supposed to be some hundred years old.

leaves are twiſted together by the friers, who make preſents of them to ornament the houſes on Palm-ſunday; and on that day they are likewiſe ſtrewed about the ſtreets.

THE vineyards looked very poorly, and are like our [s] burnt land (*Swedieland*), for there are neither leaves nor flowers to be ſeen. The vines were planted in rows, and little drains were made between each row. Medic or ſnail trefoil (*Medicago polymorpha*) and *Rumex ſpinoſus* were now in flower.

THE almond-tree (*Amygdalus communis*), in Spaniſh *Almendro*, is an ornament to the vineyards with its white and reddiſh-coloured bloſſoms.

THE olive-tree (*Olea Europæa*) was planted in large fields, having a red-coloured ſoil mix-

[s] In Sweden, Finland, Livonia, and the greateſt part of Ruſſia, where woods are plentiful, the countrymen cut down large tracts, burn them, and then they ſow the land for three years and more together, becauſe the aſhes of the wood manure the land for all that time; after which they chuſe another place, and proceed in the ſame manner; ſo that in twenty or more years they may return to the firſt place, which is then again entirely covered with wood; and this is called in the north *Swedieland*. F.

ed

ed with little ſtones. The Spaniards call the tree *Olivo*, but its fruit, or the olives, *Aceytuna*. On them grew the *Lichen criſtatus*, and below the trees bloomed a ſpecies of ſtock-july-flowers (*Cheiranthus trilobus*), and *Valeriana cornucopiæ*. In one of theſe olive-tree plantations I found *Arum ariſarum*, the roots of which go very deep. The olive-trees ſhewed no bloſſoms as yet, and had but a poor incloſure.

I saw here ſome ſmall flocks of Spaniſh ſheep: they were all white, with ſome black ſpots near the eyes, ears, and mouth. See Dr. Linnæus's Voyage to Weſtrogothia, page 58.

Artichokes (*Cynara ſolymus*), in Spaniſh *Acanziles*, or *Alcachofa*, or *Cardillos*, were planted on little hills, as we do hops; the reſt of the garden ſtuff, as beans, turneps, &c. is managed as in Sweden.

The tender plants are covered with ſkreens, which are erected almoſt horizontally at two yards from the ground: to water the plants, water is drawn up out of the well by means of a great wheel, turned either by men or by

an ass. The circumference of this wheel touches the water, and there are several earthen pots fastened to it by double strings, which fetch up the water.

GARDEN beans (*Vicia faba*) were already in full blossom in the open air, which we never can have before Midsummer-day in Sweden. This is a clear proof of the difference of the climate.

THE earthen walls, with which the gardens and plantations are surrounded, are often three yards high, and are besides covered with prickly plants: among which

THE *Agave Americana* [t] is the most common, most beautiful, and most useful. This is called *Pita* in Spain, but it is by no means the *Aloe vera*, or *semperviva*, except you will call every thing *sempervivum* which is evergreen; which would be as ridiculous as to give the same denomination to the fir and the juniper, because they both continue green all the winter. The leaves of this plant, which I was told was about six years old, were three feet long. The last year's *scapi*, which were already mouldering, were about two men's

[t] Vulg. American Aloe.

lengths; and the freſh ones, which were already a yard in length, began to ſhew their long *antheræ*. The *corollæ* were for the moſt part eaten away, but the *ſtamina* and *piſtillum* remained unhurt.

The American aloe is uſeful in many reſpects; for, beſides the uſe that is made of it in quick hedges, the leaves are ſoaked and managed like hemp, and may be ſpun for purſes and other things. With the points of the leaves, which are as ſharp and as ſtiff as an awl, they bore peoples ears, and clear tobacco pipes; but they muſt not be uſed for toothpicks, for the wounds their prickles cauſe are not eaſily healed. It is ſaid, that if its leaves, when roaſted by the fire, be laid upon wounds, the pain will ceaſe. The Americans uſe the juice of the root to cure the venereal diſeaſe. Some further account is to be met with, in the book called "The Memoirs of Sophia Eliza-"beth Brenner," printed at Stockholm, in folio. In it ſhe ſpeaks of the qualities of this plant: Upon the firſt American aloe's flowering in Sweden, it began to bloſſom in September 1708, and continued till the next winter in *Noors Sates gard*. "The *Agave*, ſays ſhe, is "a plant which ſupplies all the wants of the

" Indian, according to the beſt authorities [u] ;
" if he wants to make a hedge round his fields,
" he plants the *Agave* round them, becauſe its
" leaves are ſtiff, and armed with innumerable
" prickles. If he builds any thing, he makes
" his planks of *Agave*, which he can uſe in-
" ſtead of timber ; and he thatches his cot-
" tage with its leaves. The latter are of ſtill
" greater uſe to him ; as from the ſame mate-
" rial he makes his paper, linen, cloaths,
" ſhoes, thread, diſhes, plates, and other
" utenſils. The points of the leaves are as
" good as nails, ſpears, or pins. If he chooſes,
" he can make wine, honey, ſugar, and vine-
" gar, from its juice. If he puts the thick
" leaves of it under-ground for ſome time,
" they taſte better than melons, or lemons
" with ſugar."

Cactus *opuntia*, whoſe ſtem is thicker than a man's arm, is likewiſe uſed to cover the walls ; and beſides this, ſeveral other plants, ſuch as holly (*Ilex aquifolium*), called *Hou* in French.

[u] Nardus Antonius Recchus de re medica Nov. Hiſp. Lib. VIII. Cap. xii. Romæ, 1651.

Amongst

Amongst the thorny plants are ſeveral others ornamented with fine flowers; viz.

Lycium Europæum.
Atriplex portulacoïdes, ſea purſlane.
Chenopodium ambroſioïdes.
Aſparagus officinalis, aſparagus.
——— *falcatus.*
——— *acutifolius.*
——— *aphyllus.*
Galium aparine, cleavers, or gooſe-graſs.
Ariſtolochia rotunda.
Fumaria officinalis, fumitory, called *Conojito* in Spaniſh.

Arundo donax, a ſpecies of reed called *Cana* in Spain, held up its head above all the reſt; its flowers were already withered. It is uſed for walking-ſticks and for fiſhing-rods.

On the ſteep ſides of theſe walls, towards the road, grew *Bryum acaulon ericæ tenuifoliæ folio.* Dillen. Muſcor. 388. t. 49. f. 55. γ. *Anethum fœniculum*, or fenel, *Phlomis purpurea*, *Teucrium iva*, *Targionia hypophylla*, and the *Palmetto*, or *Chamærops humilis*, which laſt throve beſt here, and hung downwards; but theſe were not in bloſſom; nor was the *Daphne gnidium*, a ſhrub which is very like to our

Ledum palustre, or marsh cistus, and grew near the road; where I found in blossom likewise

Geranium cicutarium, hemlock leaved crane-bill.

Clypeola jonthlaspi.

Vinca major, great periwinkle, in one single place.

Hyacinthus serotinus.

——— *monstrosus.*

Veronica agrestis, germander speedwell.

Myosotis scorpioides arvensis, mouse-ear scorpion grass.

Thlaspi bursa pastoris, shepherd purse.

Centaurea pullata.

——— *sphærocephala.*

Silene conöidea.

Reseda glauca.

Anagallis latifolia.

Arum maculatum, wake Robin, or cuckow pint.

Matricaria chamomilla, corn feverfew.

Biscutella didyma.

In the gardens were the following plants growing spontaneously, in full blossom:

Papaver rhoeas, red poppy.

Stachys hirta.

Vicia

Vicia lutea, yellow vetch.

One *Phyſalis*.

Solanum nigrum vulgare, garden or common nightſhade.

Alſine media, common chickweed.

Borrago officinalis, borage, in Spaniſh *Boraja*.

Malva rotundifolia, flore majore rubeſcente.

Sonchus oleraceus, ſowthiſtle, in Spaniſh *Serajas*.

Urtica urens, annual nettle, } in Spaniſh *or-*
—— *dioica*, common nettle, } *tega*.

Ricinus communis, in Spaniſh, *Higuera del inferno*, or infernal fig-tree; this was ſcarce.

Siſymbrium irio, ſmooth broad-leaved hedge-muſtard.

Senecio vulgaris, common groundſel, which likewiſe grew on the roofs and gutters.

Punica granatum, the pomegranate-tree; it was then without bloſſoms.

In poor and waſte fields, the *Palmetto* (*Chamærops humilis*), which is called *Palmito* by the Spaniards, is as common as the juniper-ſhrub with us: the *Palmetto* has a narrow, and as it were compreſſed ſtem, with thorns on the edges. The ſtem is about a quarter of a yard long, and ends with a leaf of the ſame length,

length, which at firſt is folded together like a fan, but higher up it opens and expands. When the ſtem grows longer, it lies down on the ground. At that time this little palm-tree had neither bloſſoms nor fruit. Its leaves are every where uſed for brooms. The roots, which ſpread very much, are ſold in the towns, and eaten raw, after they have been peeled.

Upon the ſame fields grew the afore-mentioned thiſtle; and alſo

Illecebrum paronychia.
Crocus Bulbocodium.
Salvia verbenaca, wild clary.
Tragopogon Dalecampii.
Cynogloſſum cheirifolium.
Iris Xiphium.
Calendula officinalis, garden marygold.
Stachys arvenſis.
Marrubium vulgare (without flowers), white-hoarhound.

Between and below the *Palmetto* trees, the following plants were in bloſſom:

Lamium amplexicaule, great henbit.
Geranium molle, dove's-foot crane's-bill.

Andro-

Andropogon bicorne?
Linum uſitatiſſimum, flax.
Sherardia arvenſis, little field-madder.

On the road, between the gardens, I ſaw in flower,

Anemone palmata.
Aſphodelus fiſtuloſus.

Aſphodelus ramoſus, called in Spaniſh *Gamon*; this fine plant, which grows up to the height of five feet, was to be met with both within and without the gardens.

Doronicum bellidiaſtrum.
Beta vulgaris, beet.
Echinops Ritro.
Anchuſa officinalis.
Silene pendula.
Stellaria arenaria.
Lycopſis veſicaria.
Hypochæris radicata, long-rooted hawkweed.
Ranunculus bulboſus, bulbous-rooted crowfoot.
Lichen phyſodes.
Panicum crus galli.

Euphorbia

Euphorbia peplus.
——— *falcata.*
——— *exigua.*
——— *helioſcopia.*
——— *eſula.*
——— *myrſinites.*
} different ſpecies of ſpurges.

Lagurus ovatus.
Rumex acetoſa, ſorrel.

Silene floribus lateralibus ſolitariis, calycibus lanatis, foliis ciliatis. The ſtalk is thin, one foot long, almoſt quite rough, and without branches: the leaves are lanceolated, and below on the margin covered with a white wool; their other parts are quite ſmooth, out of the lower leaves ſhoot up ſome imperfect *petioli:* but the flowers come ſingly from the corners of the upper leaves alternately, and not two by two, on very ſhort peduncles. The club-like *calyx* has ten points, covered with a long white wool.

January 28th, and the following days.

I WENT again to the fields which lye before the city of *Puerto de Santa Maria;* and found, beſides the above-mentioned plants, the water-crowfoot (*Ranunculus aquatilis*), whoſe white flowers

flowers entirely covered the ditches and ponds. In them I found alſo the *Conferva bulloſa*. I came into a little wood of Spaniſh firs, where the *Byſſus candelaris* cloathed the trees. The wood was ſurrounded, like the gardens, with hedges of *Agave*, or American aloe. It is no wonder that theſe woods are incloſed, for the thin and hard boards they afford for cheſts to pack lemons in are often dearer than the fruit itſelf. In the fir-wood I found a good many ſcarce plants, and among the reſt the *Siſymbrium ſylveſtre*, on which I diſcovered a hairy caterpillar, which afterwards became a ſmooth, pale-green coloured, oblong-pointed, angulated, warty, black aurelia, having on the back a convex elevation. In its third change it became the *Papilio hyale* Linn. or *Papilio Carolinianus luteus apicibus nigris*. Petiv. Muſ. p. 12, T. VII. fig. 10.

Orchis *fuſceſſens* Linn. *bulbis faſciculatis, nectarii labio ovato indiviſo ſubcrenato*, was very worthy of obſervation, as appears from the following deſcription: the root conſiſts of two or more tuberous ſimple bulbs, excepting four or ſix fibres towards the beginning of the ſtalk; the ſtalk was about the length of a ſpan, round and red; four leaves are near the root,

root, the lower ones are larger, and oblong-oval (*ovata lanccolata*); the upper ones are leſs ſpeckled alternate, and cover the remainder of the ſtalk with the ſheath in which they end at bottom: the *ſtipula* which is below every flower is lanceolated, and like the leſſer leaves of the ſtalk of a red colour: the flowers at moſt are ſeven, fleſh-coloured, and conſiſt each of five petals, that is three outward and two inward, which are almoſt equal to one another, lanceolated, and rolled up (*convoluta*); the lower lip of the *nectarium* is oval, entire, and ſomewhat crenated; the two *ſtamina* had round green *antheræ*.

The *Antirrhinum arvenſe*, or ſnap-dragon, was very ſmall, but diſcoverable by its yellow flowers.

Allium *ſubhirſutum*; the root conſiſts of two, three, or more white bulbs, from which run out little fibres; their ſcales are hard, brown, imbricated, and very irregular; the ſtalk is round, and uncovered at top; the leaves grow commonly enſiform or ſword-ſhaped towards the root, and carinated below; they end in a point, are hairy on the margin,

and longer than the ſtalk; the *ſpatha* is torn, and generally withered: the flowers which form the *umbella* are white, and conſiſt of ſix oval, oblong, concave, erected petals: the ſix filaments are pointed at the top, as long as the *corolla*, and come from the *thalamus*: the *antheræ* are oblong, ſhort, and upright: the *germen* is round, blunt, and triangular; the *ſtylus* is as long as the filaments; the *ſtigma* is erected: the *capſula* is globular and trilocular; the ſeeds are generally oval and angular. It thrives moſt under buſhes of the

PASSERINA *hirſuta*; the ſtem of which has many branches ſimilar to thoſe of the juniper ſhrub, has no leaves, is round and diffuſe; the branches are full of leaves, and bent every way: the leaves grow alternately, are ſeſſile, carnoſe, ſmall, ovato-lanceolated, depreſſed in the middle, with a concave margin, woolly and white at the top, and dark-green below: the flowers have no *pedunculi*; they are ſmall, of a yellow colour, and come in great numbers from the ſame buds with the leaves: inſtead of the *calyx*, which is wanting, are four or more leaves under the flowers: the *corolla* conſiſts of an *infundibuli*-form petal, whoſe

inside is woolly; the tube is cylindrical; the *limbus* is quadrifid and shorter than the tube; the *laciniæ* are oval and reflected; the filaments are fastened to the tube, and four of them are a little lower than the other two; the *antheræ* are almost oval, they lie across the filaments, and are composed of two valves. This shrub grows in the fir-woods like our juniper shrub, and in other places out of town: it is called *Torvicho* here, but in other places *Tomillo*. On this shrub lives the *Meloe majalis* Linn. *segmentorum abdominis marginibus dorsalibus rubris*.

Saltamatos are a species of locusts, so called by the people here, which are to be met with in the above-mentioned fir-wood. They were of so remarkable a size, that, when flying, they looked like little birds, which they imitated farther in not settling on the ground, but always on high trees, and often at such a height that they were scarce visible.

Besides the *Coccinella septem punctata*, I gathered many scarce insects, most of which were destroyed during my absence from the inn, all the apartments being open to every body.

body. Thoſe that remained, and which I took on-board with me, were,

Scarabæus (*ſacer* Linn.) *lævis, thorace inermi, capite antico ſexdentato. Habitat in arenoſis maritimis.*

Scarabæus (*typhœus* Linn.) *thorace tricorni, intermedio minore. In campis.*

Scarabæus (*bilobus* Linn.) *thorace mutica, capite cornuto, elytris ſtriatis.*

Carabus totus niger, ſtrigis ſeptem in ſingulo elytro muricatis.

Tenebrio (*muricatus* Linn.) *elytris muricatis.*

Papilio (*rumina* Linn.) *tetrapus, alis ex coccineo, luteo, argenteo et nigro variegatis, primoribus rotundis.*

Papilio medius gaditanus ex nigro et ſulphureo varius. Catesby.

Oniſcus (*aſilus* Linn.) *abdomine foliis duobus obtecto, cauda ſemiovali. Habitat in piſcibus marinis.*

February the 8th, and the following days.

As my greateſt amuſement was in the country about Port Mary, I went there again to-day, and had ſcarce gone in at my old land-

lord's, when I found fomething new; before the window was a plant which they called *St. Joſeph's flower*, and which is faid to grow hereabouts in low ground; the *ſcapus* was triangular, and the flowers quite white; it was *Allium triquetrum*. I went without any company on the road towards Puerto Real, but was forced to return again on account of the rainy weather. The following plants I found in bloſſom:

In low places.

Geranium gruinum.
Bellis annua, common daiſy.

On the road.

Anemone palmata.
Antirrhinum bipunctatum, below the palmetto.
Ciſtus Fumana.
—— *Tuberaria.*
—— *ſalicifolius.*

On dry hills every-where.

Satureja capitata (ſine flore).
Lavendula ſtœchas.

Orni-

Ornithogalum umbellatum, ſtar of Bethlehem.

Ornithopus compreſſus.

Antirrhinum orontium, leaſt ſnap-dragon.

Teucrium fruticans.

Leucojum autumnale.

Coronilla juncea.

Hippocrepis comoſa, tufted horſe-ſhoe-vetch.

Anthyllis tetraphylla.

Ruta graveolens, rue.

Ciſtus hirtus, } two ſpecies of *Ciſtus*, of
—— *ſalvifolius*, } which the latter is called *Ro* in Spaniſh, and is a ſmall ſhrub which made but a poor appearance at that time: for the branches were of the ſame colour as the ground they lay on, and ſo were the leaves; but in March it ſurpaſſed all its neighbours, by its large odoriferous white flowers.

It began to rain harder and harder, which made me haſten back; but I turned into another road, which led to the town of *St. Lucas*. I here found about the gardens the *Spartium ſpinoſum*, with its fine golden yellow flowers. At laſt I was obliged to turn off to the left of the road, and came on a common, which, excepting ſome little hillocks, was all under water: upon it I found a plant till then quite un-

known, namely the *Verbascum Osbeckii* Linn. of which I made the following description: the plant spreads on all sides; the stalk lies on the ground, is undivided, triangular, and nervose; the leaves are oval, and cut into irregular segments; the upper leaves are less, almost sessile, the lower ones have *petioli:* the peduncles are woolly, most of them bifid, and come from the bottom of the leaves; the *calyx* is deeply quinquefid, woolly, with lanceolated segments; the *corolla* is rotated, the tube short; the *limbus* quinquefid; the five filaments are very short, and rest on a *squama*, covering the *germen*; the *antheræ* are oblong, erected, and longer than the filaments; the *germen* is almost round; the *stylus* is longer than the filaments; the *stigma* is entire and pointed: the fruit was not yet visible: the whole plant had a smell of musk, and might probably find a place in the apothecary's shop.

At three o'clock in the afternoon, I arrived at my inn quite wet; but an hour after I accompanied some of my countrymen who went out of town to buy lemons. I soon observed a particular tree in a garden, which had nothing but a few crooked pods, with neither leaves nor flowers, and consequently nothing

nothing by which it could be known. The Spaniſh name of it is *Aromas*; and our induſtrious Mr. Loefling, who travelled into America, at the expence of his Spaniſh Majeſty, in order to make obſervations on natural hiſtory, for ſome years together, wrote to me, in his letter from Madrid, that it was the *Mimoſa Farneſiana*, a ſpecies of ſenſitive plant. One of the company ſaid, he had ſeen this fruit eaten in the Eaſt in times of ſcarcity.

We walked from hence into a lemon plantation, where the *Tanacetum balſamita*, vulgo *Coſtmary*, which is here called *Yerva de Santa Maria*, and the wall-flower, or *Cheiranthus cheiri*, were planted, and the latter in pots. Among the wild plants, the *Anchuſa officinalis*, or officinal bugloſs, and the *Spergula pentandra*, or ſpurrey, were in plenty.

Not far from the town, we paſſed a well ſurrounded by a very high wall, round which there was a trough, for the cattle to drink. The well was covered with a ſort of ruſh (*Juncus acutus*) called *Paron* in Spaniſh. At night we returned to our inn, where we paid

a piaſtre [w] a day for an open room and an ordinary. To this if you add ſome other unavoidable expences, the income of three thouſand copper dollars [x] for the whole voyage to China will not admit of many more amuſements on ſhore.

February the 10th.

This morning I left the town with an intention to go on board our ſhip; but a ſudden eaſt-wind made us paſs her, and brought us to Cadiz, where, to our great ſurprize, we landed at nine o'clock the next morning. The way by land is much longer; but you paſs through two little inſignificant towns, *Puerto Real* and *Chiclana*.

I was glad to come from the boiſterous ſea into an agreeable garden; the ſummer-houſes of which were covered with our common ivy (*Hedera helix*), called *Yedra* in Spaniſh.

[w] Rather more than four ſhillings ſterling.

[x] A Copper dollar is about five pence, or five pence halfpenny ſterling.

Apis

APIS *violacea* fought its nouriſhment on the bean-flowers in the forenoon, but in the afternoon it reſted on the vine-tendrils, or on the dry buſhes, which were laid over the covered walks to keep off the heat of the ſun. Theſe ſummer-houſes were covered with the blue paſſion-flower (*Paſſiflora cærulea*) which had neither flowers nor fruit at that time. Beſides theſe beans, there were Indian creſſes (*Tropæolum*,) vulgo *Naſturtium*, wild roſes, *Ricinus communis*, and borrage (*Borrago officinalis*); which are likewiſe common in our gardens.

SPANISH locuſts, called *Grillo* in Spain, are by the people of faſhion kept in cages called *Grilleria*; whereas our locuſts are not in the leaſt eſteemed, and ſing their ſong without being taken notice of.

February the 15th and 16th.

I AGAIN went to the *Puerto de Sancta Maria*, where I re-viſited the above-mentioned incloſed fir-wood, in which I found the fine *Orchis*, already withered; but as I could find no other plants beſides thoſe I have already men-

tioned, I went into the open wood, which begins at the ſhifting ſands, and goes a good way into the country. It was not ſurrounded by a hedge, and I ſaw nobody in it except an honeſt wood-man. In a low place I found a moſt beautiful flower, which would be an ornament even to a green-houſe: this was *Ophrys inſectifera adrachnites* (*labio trifido*): the root is a bunch of oblong bulbs, whereof thoſe in the middle are longer than thoſe on the outſide: the ſtalk is of the length of a ſpan, green, and uncovered above the middle; the leaves are green, thoſe near the root are ovato-lanceolated, and four or more in number; the *bracteæ* are green, and are as long as the flowers; the flowers are about three in number; the three outward petals are oblong, and the two inner ones ſmall, like teeth; the under-lip is ſoftly lanated at top, dark-red, with very fine ſpots, and cut into three parts; the middlemoſt *lacinia* is the leaſt, which makes the whole lip look quadrangular-heart-ſhaped; the *antheræ* are yellow, egg-ſhaped, and oblong.

At laſt I returned to the ſhip; and the next Sunday, ſeventeen of the crew received the Lord's-ſupper before the ſermon.

March

March the 1st and 2d.

RAIN and other circumstances had prevented me from going ashore: I therefore went with the Spanish water-boats to Port St. Mary, and from thence immediately proceeded on the road to Port Real, to which town I had got towards the evening; but I returned, as I longed to be at my former inn again. I found the following plants in blossom:

On a dry hill.

Anagallis monelli.

Mercurialis tomentosa; of this I found no more than two plants, one male, the other female; as they were but a few yards from one another, the fructification might easily be effected by means of the wind.

The *Conyza saxatilis* did not as yet shew its flowers.

The meadows which had no inclosure were ornamented with

Adonis annua, pheasant's-eye, which is one of our finest garden-flowers.

Lupinus

Lupinus albus,
——— *varius*,
——— *hirsutus*,
——— *luteus*,
} Species of lupins.

Cerinthe major.

On the roads.

Echium Creticum.

Cistus tuberaria, calycibus hispidis, unguibus petalorum et calycibus punctatis.

Cynoglossum cheirifolium, corollâ inflexâ cæruleâ.

Anchusa angustifolia.

In low places.

Chenopodium fruticosum (now *Salsola fruticosa*), shrub-stone crop, or glass-wort.

Cynara humilis.

Anthemis valentina.

Arenaria rubra, purple spurrey.

Chrysanthemum coronarium.

——— ——— *segetum*, corn marygold.

Near a ditch.

Veronica anagallis aquatica, water-speedwell, or brook-lime.

Near

Near the river.

Salicornia fruticosa, salt-wort.

On hills.

Scorpiurus sulcata, caterpillars, (the plant so called.)
Hyoseris radiata.
——— *hedypnois.*
——— *rhagadioloides.*
Rubus fruticosus, common blackberry.

In a clay ground, on high grass fields.

Scrophularia sambucifolia; and near it,
Ammi Hispanicum.

In the olive plantations, and other dry places.

Cheiranthus trilobus.

In holes, and the like places.

Carex cæspitosa.

Between the high-grass on a barren mountain grew nothing but the

Ophrys insectifera myodes, labio quadrifido, fly-orchis, the root consists of two almost round bulbs;

bulbs; the ſtalk is double-edged (*anceps*), flat and twiſted; four leaves are at the root; they are ovato-lanceolated; the fifth is lanceolated, and ends below in a ſheath; the *bractea* of every flower is as long as the *pericarpium*; the three outward petals are oblong, with reflected margins, and the two inner ones equally broad; the upper lip is bigger than uſual in the other ſpecies, the lower or under-lip is quadrilaciniated, very much reflected on the margin, ſoftly lanated towards the point, and of a cheſnut-brown colour, acroſs which runs a ſhining ſtripe; the two middlemoſt *laciniæ* are the longeſt; the filaments are thread-ſhaped; the *antheræ* are oval, and yellow.

In the evening I had the honour of ſpeaking to two Spaniſh prieſts, one of whom offered to accompany me to the town of St. Lucar, but I was hindered from going by the night and other circumſtances. The next day I went on-board, and this was the laſt time that I ſaw this agreeable place.

March

March the 6th.

On my arrival at Cadiz, I ſaw the *Hedyſarum coronarium*, or French honey-ſuckle, in plenty. The Spaniards call it *Soya*, and the French *Saint foin*[y]; it was brought to town in great bundles, as food for the cattle: the *Tillæa procumbens*, or the ſmall annual houſe-leek, on every wall.

March the 16th.

I went up the Gulph of Cadiz, in the boat belonging to Captain Eckeberg, to a place where freſh water could be got as eaſily as at *Puerto de Sancta Maria*, although the way to the ſhip called *The Peace* was ſomewhat longer, which ſhip the above-mentioned Captain brought hither to ſell on the Swediſh Eaſt-India Company's account, as ſhe was now reckoned too ſmall for that trade. We paſſed the Spaniſh ſilver-fleet and the little caſtle *Pontal*, where

[y] What we call *St. Foin* in *England* is the *Hedyſarum Onobrychis*; the *Hedyſarum Coronarium* is planted for ornament in our gardens.

the Swedes may bury their dead for a certain ſum: when we went out of our boat near the watering-place, I was delighted to find ſome natural productions which I had never ſeen before. Here were great dry heaths on all ſides, which I ſhould have been very glad to have gone through; but the remainder of the day only allowed of a partial examination. We went towards the town of *Iſla*, and found the following ſcarce plants:

Spartium ſpinoſum.

Geniſta Anglica, needle-furze, or petty whin, called *Eſpino* in Spain.

Piſtacia lentiſcus.

Smilax aſpera.

Ulex Europæus, furze.

Orobanche major, broom-rape.

——— *ramoſa*, branched D°, which had the following characters: the ſtalk is about a ſpan long, entire, ſmooth, and ſucculent; the *bracteæ* are lanceolated, there is one of them under every flower; the *calyx* is quadrifid; its four *laciniæ* are linear and hairy at the margin; the *corolla* is monopetalous and gaping (*ringens*); the tube is almoſt cylindrical, and as long as the *calyx*; the *faux* is open (*dehiſcens*); the upper-lip is bifid, and emarginated before;

the lower-lip is trifid, with equal *laciniæ*; two *nectaria* are in the under-lip, and sometimes on the sides; the filaments are four, which are commonly pretty long, and almost all equal in size; the *antheræ* are white, didymous, erected, joined into a semi-cylinder, and end below the *stigma* in a short bristle (*seta*); the *germen* is oblong; the *stylus* is pointed; the *stigma* is elevated, great, bifid, and pointed downwards; the *capsula* is oblong, unilocular, and bivalve; the seeds are small and numerous.

Ophrys bracteis cymbiformibus, the root . . . . . ; the stalk is of the length of a span (*scapus spithamæus*); the leaves are three or more in number, their shape is ovato-lanceolated, they stand alternately; the *bracteæ* are carinated, and like the leaves on the stalk not variegated; the innermost petals are small, oval, connivent, and not quite green: the upper-lip is the least, and coloured at the bottom; the lower-lip is succulent, oval, blunt, or emarginated with inflected sides, and coloured, except one part which is green, in the two opposite points; the filaments are thread-shaped, one of them is fixed to the lower-lip, and the others to the outward petal; the *antheræ* are globular,

globular, and yellow; the *germen* is furrowed. I only found a ſingle plant, which was perhaps unnatural.

Serapias lingua, baſtard hellebore: the root conſiſts of two hanging oval, black, bulbs; the ſtalk, and the flowers, are twiſted to the left; the former is covered with about ſeven linear lanceolated leaves, which are red ſpotted, like the ſtalk itſelf; the *bracteæ* are of equal ſize with the petals, and like them lanceolated, pointed (*acuminatæ*), pale-red on the upper-ſide, but not dark-red at the bottom as the petals; the two innermoſt petals are broader at the bottom, waved (*undulata*), narrow towards the point, ſharp-pointed, and with entire margins: the lips are long and red; the upper has narrow reflected points; the lower is dark-red, large, and lanceolated, has inciſions on both ſides towards the bottom, and its ſurface covered with ſome dark hair; the filaments are very ſhort and yellow; the *antheræ* are green: it grows on the plains among the above-mentioned *Aſphodelus*, page 59.

Serapidis linguæ varietas minor, is to be met with along with the former.

HERE

HERE I found likewiſe the *Ciſtus ſalvifolius*, and in the garden was the *Myoſotis apula*. I obſerved the following things in this plant: the *calyx* has a thick wool upon its ſegments; the *corolla* is quinquefid; the tube is long and linear; the *limbus* is quinquefid, with oval *laciniæ*; the filaments are faſtened at the bottom of the *corolla*, and are hardly viſible on account of their ſhortneſs; the *antheræ* are very ſmall and oblong; the ſtalk is of a ſpan's length; the leaves grow alternately on the ſtalk, are equally broad, have a prominent line below, and are rough.

AT laſt we reached the town of *Iſla*, which is a little unfortified place, leſs than any I have hitherto mentioned. It is about a quarter of a Swediſh mile off the ſea-ſhore, in a plain country; it has on one ſide a barren field, and on the other a river: the houſes are not very large, but ſtrong; the ſtreets are broad and fine. The (*Spartium junceum*) Spaniſh broom ſhewed its admirable flowers over a garden-wall which was higher than a man's head; this plant is diſcoverable at a great diſtance by its fine ſmell. We lodged with an Engliſhman who lived in this town; he accompanied us over a bridge, be-

tween the town and peninsula of *Cadiz*, to shew us a sail-cloth manufactory which is carried on by gypsies and other prisoners, both men, women, and children. These people are locked up in their prisons on holidays, from whence they infest passengers through the rails, in the same manner as in *Cadiz*. In the yard of this building were the soldiers, who had mounted guard there. We were obliged to return without effecting any thing, and I only saw the *Arenaria rubra*, and some common plants around the Englishman's house, which was the last on this side.

After dinner I was obliged to return to my congregation, on account of the next Sunday. I returned through a meadow, where I saw the following plants in blossom:

Cratægus oxyacantha, hawthorn.
Ricinus communis.
Convolvulus althæoides.
Astragalus bæticus.
Heraclium sphondylium, cow-parsnep.
Malva mauritiana.
Hypochæris maculata, spotted hawkweed.
Plantago coronopus, buckshorn plantain.

In

In holes I found:

Ranunculus muricatus.
Crepis fœtida, ſtinking hawkweed.

In the fields:

Fritillaria meleagris, fritilary.
Poterium ſanguiſorba, burnet.
Anthoxanthum odoratum, vernal-graſs.
Teucrium fruticans.
Reſeda glauca.
—— *lutea?* (*tetragyna procumbens*).
Briza media, quaking-graſs.
Centaurea ſphærocephala.
Aſparagus officinalis, aſparagus, which is cut here in the fields, and ſold when young for the ſame purpoſe as in our country.

Near the ſhore the following plants were in bloſſom:

Hyoſcyamus albus.
Corrigiola littoralis.
Statice armeria, thrift.

At night the water ſhone in ſeveral places, which was owing to ſome pieces of rotten ray or other fiſh.

March the 18th.

To-day I got the *Meloe variegata* from a gentleman who had been near *Iſla*. He ſaid, that when he ſaw this inſect, the Spaniards about him adviſed him not to take it into his hand, on account of its bite being poiſonous. They feigned to take great precaution in catching this pretended noxious animal; probably in hopes of receiving a reward from ſtrangers.

EUPHORBIA *ſerrata?* I likewiſe received from the ſame place: its *umbella univerſalis* was trifid, triphyllous, with a cordato, lanceolated, reflected leaf.

AND alſo the *Scilla Peruviana*.

March the 20th.

ON weighing the anchor, ſome crabs were pulled up; they were *Cancer brachyurus*, *hirſutiſſimus*, *ſubovatus*; and likewiſe

CHITON *læve*, which Petiver calls *Oſcabrion*: the *ſhell* is carinated, and conſiſts of eight tranſverſal pieces, which are furrowed tranſverſly;

tranſverſly; the *margin* of the ſhell is ſoft, the reſt is hard. The animal is flat, ſoft, and covers the inner part of the ſhell; which, when touched, it contracts, ſo that one point touches the other.

CANCER *brachyurus, ovatus, ſpinoſus, poſticè lævis.*

IN the room of our ſurgeon, whom we left ſick in Spain, we took an Engliſhman called *Thomas Druit* with us. A Spaniſh paſſenger alſo, *Joſeph Garcias Domingo Rivero*, a merchant's ſon from *St. Ander*, about twenty years of age, came on-board in order to go to *Manilla*.

ANIMALS of all ſorts, *viz.* oxen, hogs, chicken, pigeons, &c. were in ſo great plenty in our ſhip, that we ſtill had ſome of them left on our return from *China*.

AFTER a ſtay of ten weeks in Spain, we ſailed at ſix o'clock at night from Cadiz, with a good wind, though the eaſtern trade-wind is ſeldom found below the thirtieth degree of latitude.

The weather was very changeable during our ſtay in Spain: ſometimes it was dry almoſt a whole week, ſometimes foggy, often for three or four days together rainy, then we had thunder, and it was almoſt always ſtormy.

March the 23d, 33° 15′ N. L.

We little expected to meet with our *Hoopoe* (*Upupa epops* Linn.) ſo far from Sweden. This bird approached our ſhip to-day, and went along with us a good way. I have before ſeen it in Spain; and in order to ſhew what alteration the ſeaſon or the climate might cauſe, I drew up the following deſcription: the *beak* is angulated, compreſſed, arcuated, long, ſharp: both the *jaws* (*mandibulæ*) are equally long, and triangular: the *noſtrils* are oblong: the *head* is adorned with a creſt of yellowiſh brown feathers with black tops, of the length of the beak; though the middlemoſt feathers (of which there are twenty-four) are ſomewhat the longeſt: the *neck*, the breaſt, the belly, and the foremoſt part of the back, are of a yellowiſh brown: the *vent feathers* are white, and the back black, with white ſtripes; but the

coverts

coverts of the tail are quite white. The sixteen *quill feathers* are black, with broad white croſs ſtripes; the nine foremoſt of which have one, the tenth two, and the reſt three or four white lines a-croſs, excepting the three leſſer coverts of the wing. The eight *feathers of the tail* are black, and have at top and below a white ſtripe: the thighs, and the beak as far as the noſtrils, are covered with little yellow-browniſh feathers: the *feet* and *toes* are dark grey; of the three fore-toes the middlemoſt is the longeſt, the reſt are of the ſame length with the back-toe. This bird was of the ſize of a pigeon. I was told that the Spaniards called it *Coccis* on account of the note which is peculiar to this bird.

March the 26th.

At half an hour after ſix in the morning, we ſaw the Iſle of *Teneriffe*, (in N. N. W.) which belongs to the Spaniards, with the other Canary iſles, *Canaria*, *Palma*, *Gomora*, *Lancerota*, *Ferro*, *Port Sancto*, *Forta Ventura*, and *Madeira*. *Teneriffe* ſeems very barren towards the ſea ſide, on account of the high mountains without trees; but it is ſaid to be very agree-

able further up the country, and to produce a quantity of wheat, lemons, oranges, but particularly grapes. The city of *Sancta Cruz* lies on the sea-shore; we passed pretty near to it, and counted in its harbour about fourteen ships at anchor, one of which hoisted the Swedish, one the English, and one the French flag, after we had hoisted ours. This town is well known; we fetch many sweet wines from thence, such as Canary, sack, and malvasy, or malmsey; and carry them the staves with which they make their pipes. In the last war, Spain had the treasure of the silver fleet in this harbour: from whence also our East India merchants fetched the money necessary for the Chinese trade. The city is surrounded by walls, ramparts, and other fortifications. The bishop of the *Great Canary* is said to have chosen this place for his summer residence. The *Pico Teneriffe*, which is situated at twenty-eight degrees, and twelve minutes, northern latitude, and thirty-four degrees, and fifteen minutes western longitude from *Upsal*, was, at twelve o'clock, two or three leagues off to the N. W. this mountain is reckoned among the highest in the world. It lay on the other side of the isle, but was nevertheless very conspicuous above the other mountains,

mountains, and seemed in shape like a hay-stack. It is affirmed that its summit continues burning, and for that reason nobody dares ascend so high. *Teneriffe* being on our right, *Canary* was consequently on the left, but out of sight. The passage here is reckoned more safe than on the other side of *Tenerriffe* [z].

The 28th of March, 22° 12′ North Lat.

Past eight o'clock in the evening the wind abated, and such a continual lightning ensued, that it seemed as if the whole ship was on fire. Afterwards it likewise thundered a little, and about nine o'clock fell a violent hail-storm; the largest of the stones were of the size of beans. The figure of the hail-stones was not alike, yet they all had two or three white rings in the middle, like fishes-eyes. This was a remarkable Maunday-thursday, especially so near the tropic of Cancer, which we passed the midnight next following.

[z] For a full account of *Pico Tenerriffe* see Bishop Sprat's History of the Royal Society.

The

The 30th of March, 19° 34′ N. L.

Besantyes is a word as familiar to our people who go to the East Indies, as it has been strange and unknown hitherto to naturalists. A multitude of *Besantyes* sailed by our ship at this time, with their bow-like, expanded skins; but sometimes they turned over and dipped their sails into the water. I was not able to get one of these little animals, although I wished it very much. At a great distance they look like green fish-bladders, with little sails, from whence they derive their name.

The flying-fishes (*Exocœtus volitans*), which generally live about the tropics, and especially in the Western ocean, now began to appear near the ship. They have many enemies both in water and air: in the former they are pursued by the *Scomber Thynnus*, or tunny, by the *Scomber Pelamis*, or bonnet-fish, and by other fishes; in the latter, the *Phaëton æthereus*, or tropic-bird, the *Pelecanus Piscator*, or booby, and the *Pelicanus Aquilus*, or man of war, are their enemies. All these look upon

upon the flying-fiſhes as created for their uſe. Providence has given them longer pectoral fins than any other fiſh, with which they fly as light and as ſwift as a bird; but are forced to dip into the water, at the diſtance of a common gun's ſhot. They ſometimes fall upon the ſhip's deck when flying; they are then quite unable to help themſelves off again, and die quickly. On the evening we ſaw a ſwallow in our ſhip; but it was ſo wet, that it ſeemed as if it was but juſt out of the water.

The 31ſt of March, 17° 40′ N. L.

The ſwallow which we ſaw yeſterday, was ſo tired to-day, that we could catch it with our hands. It was the *Hirundo ruſtica*, or houſe-ſwallow. It is ſomewhat extraordinary, that it ſhould be met with at ſo great a diſtance from Sweden, and in ſo different a climate. I do not pretend to aſſert, that it came yeſterday from the bottom of the ſea, as it was taken ſo near the Canary iſlands [b].

[b] Our author, with the northern naturaliſts, takes it for granted, that ſwallows retreat under-water when they diſappear in autumn; there is good evidence that many of them migrate from Europe to Africa; and it has been fre-

The

The 1st of April, 15° 20′ N. L.

We now saw a sea-turtle sleeping on the surface of the water, but it was wakened by the passing of the ship: we likewise saw a kind of birds which our ship's-crew called *boobies*[c].

The 3d of April, 10° 22′ N. L.

Our passenger told me, that the *Sepia loligo* Linn. a species of cuttle-fish, or ink-fish, was eaten by the Spaniards, and that they called it *Cangrejo*. They have their enemies in common with the flying-fish. As soon as the *Sepia* wants to fly, it expands its arms (*tentacula*) like a brush, and also its rhomboidal tail-fin. It has peculiar characteristicks:

The black *bill* looks like that of a vultur; the *jaws* are pointed, short, and bent; the

quently asserted, that a few have, at times, been found in a torpid state, hid in old buildings: but how a bird so much lighter than water, can contrive to keep itself half a year at the bottom of the sea, seems inexplicable.

[c] Our sailors call the *Pelecanus sula* Linn. a booby.

bill is ſurrounded by a circular *mouth* which has ragged inciſions (*os lacerum*); round the mouth ten arms are fixed, whereof eight are trigonal, pellucid, thread-ſhaped, ending in a point, at the outward end warty and dentated; the two others are round, thread-ſhaped, longer, ſmooth at the bottom, but warty at top. The *ſhell* is ſoft, cylindrical, thicker before, ſmooth, and red ſpotted: the *eyes* are large and black: the *head* and *tentacula* are tranſparent, marked with little black dots: the *back* is of a golden colour, inclining to browniſh; and tranſparent towards the tail, with black dots: the *belly* is pale red: the *tail* is ſharp pointed, and covered with a ſoft rhomboidal *fin*. The animal is ſaid to contain an ink-like juice in a bladder; it is eaten by the Chineſe.

The bonnet, from the Spaniſh *Bonito* (fine), is a ſpecies of fiſh which is always very plentiful within the tropics, and lives upon flying-fiſhes and ink-fiſhes. The bonnet is a ſpecies of mackarel, but much larger than our ſort. It is eaten, although its fleſh is very dry. It is caught in the following manner: you take a fiſh made of lead or tin, put on a large fiſhing-hook and faſten the tops of two feathers

to

to it, oppoſite to each other, that it may look ſtill more like a flying-fiſh; you add another top of a feather or two for the tail-fin; at the end of this artificial flying-fiſh you faſten a ſtring: you then move it up and down over the water on either ſide of the ſhip, till the bonnet bites. The bonnet is likewiſe ſtricken by harpoons, which is another way of taking it. The name of this fiſh is to be met with in many accounts of voyages; however, I ſhall give the following deſcription for thoſe who have no opportunity of viewing the fiſh itſelf:

Scomber pulcher[d], *pinnæ dorſalis anterioris oſſiculis quindecim, pinnalis ſubtus inter Caudam & Anum ſeptem.*

In Swediſh *Bonnet*; in Spaniſh *Bonito*.

The *dorſal*-fin has fourteen or fifteen radii, the *pectoral* fins each twenty-eight, the *ventral* fins each ſeven, and the *anal* fin fourteen: the *tail* is large, bifurcated, and has twenty-ſix rays: the *head* is compreſſed: the *body* is rather elevated than flat on the ſides: the *belly* is not ſo round as the back: the *mouth* is large, or rather very wide: the lower *jaw* is the longeſt: the *forehead* runs into a point: the *eyes* are of a middling ſize, they are placed in

[d] *Scomber Pelamis* Linn. Syſt. Nat. p. 492.

the

the ſides of the head, are roundiſh, oblique, and ſhine like ſilver. The *opercula branchiarum*, or coverings of the gills, are two round plates. The *membrana branchioſtega* has ſix radii, and is covered; the upper radii are very long, the lower very ſhort. The *teeth* are all in one row in the jaw; they are pointed and numerous. The *tongue* is wedge-ſhaped, with the ſkin a little convex on the ſides. The *linea lateralis* is bent, near the head it approaches the back, and is thicker thereabouts. The *ſcales* are very ſmall, and lie quite ſingly. The colour of the belly as far as the *linea lateralis* is ſilver-coloured; on each ſide run four blackiſh lines lengthways. The back is blueiſh and very little elevated. The appendages on the ſides of the tail are very thin: the firſt dorſal fin from the head to the ſecond has fifteen hard radii or rays diſtant from each other, ten of the hinder rays uſually fold into a furrow of the back after the death of the fiſh. The ſecond dorſal fins conſiſt of ten or fourteen ſoft rays covered on the ſides with little griſtly ſcales, hardly to be diſtinguiſhed. The pectoral fins are of an elliptical lanceolated figure, and have twenty-eight rays, divided at top, of which the loweſt are the ſhorteſt. The ventral fins are long, with ſe-

ven

ven ramose rays, which are almost grown together at the bottom; the inner ones are the shortest. The anal fin is somewhat nearer to the tail than the dorsal fins, and is about the same size and form, consisting of fourteen rays which are distinguished with difficulty. The ventral and anal fins are surrounded like the following little softer fins, with a gristly skin. Below the two dorsal fins are eight, and below the anal fin to the tail seven other little fins with different rays. The tail is furcated, very much extended, and consists of twenty-six rays. The pectoral and the ventral fins are directly opposite to the beginning of the dorsal fin, and their length is equal to that of the first ray of the first dorsal fin. The *swimming bladder* sticks to the backbone and is long. The heart is tetraedrous. The belly is an oblong oval. As this fish is dying, it trembles and quivers much. Its length is scarce two feet. I have been enabled to examine many of them, and always found that the first dorsal fin is the surest specific distinction.

The 4th of April, 8° 19′ N. L.

LAST night about one o'clock we passed in the 9th deg. 20 min. N. L. and

3°

3° 15′ Weſt longitude from *Teneriffe*. The Sun being weſt in *Aries* 25° 25′ 42″. For this reaſon no obſervations were made to-day. A dolphin was wounded by an harpoon, but broke it and got off.

The 5th of April, N. L. 6° 28′.

The heat was very great to-day as well as yeſterday. Our water, which began to ſtink before we were quite clear from *Cadiz*, now grew ſweet again. This change may be explained from natural cauſes; for on ſtraining the water through a coarſe cloth many gnats and *oniſci* were found in it in a perfect ſtate.

April the 6th, N. L. 4° 40′.

We now loſt the north-eaſt trade-wind, which helps the ſhips forwards all the year thus far from the thirtieth degree of N. L. becauſe it continually blows from north-eaſt, or at leaſt with little variation. In the morning it began to rain; afterwards it grew calm, as is always uſual about the Line.

THE tunny is a fiſh very like the above-mentioned bonnet, but may be eaſily diſtinguiſhed from it by the longer pectoral fins, and the white belly. The difference is more plainly ſeen in the following deſcription:

Scomber albicans [e] *pinnæ prioris dorſi oſſiculis quatuordecim, pinnulis ſubtus inter caudam et anum octo* P. D. *prior oſſiculis quatuordecim: poſterior duodecim.* P. *pectoralis triginta duo.* P. *ventralis ſex.* P. *ani tredecim. Cauda triginta oſſiculis.*

THE *firſt dorſal* fin has hard rays, and the hindmoſt of them fold into a furrow of the back: the *ſecond* dorſal fin is flexible, triangular, as in the bonnet; its eight firſt rays are longeſt; they are ſingle, and of the length of the firſt fin; the remaining rays were gradually ſhorter and divided into many branches; it is connected with the eight flexible ſmall fins, whoſe rays are divided: the *pectoral* fins are about ſix inches long, and treble the length of thoſe of the bonnet; they have thirty-two rays: the *ventral* fins have ſix rays:

[e] *Scomber Thynnus*, Linn. Syſt. Nat. 493.

the

the *anal* fin consists of thirteen rays, the hindmost being the shortest; it is flabelliform and connected with the eight little fins: the colour of the second dorsal fin, of the anal fin, and of the eight little ones, is yellow at top and at bottom: the *tail*, which has thirty rays, is longer than that of the bonnet, but not so much expanded. The length of the fish is not quite two feet: the *body* is compressed, has flat sides, is white below to the *linea lateralis* and above it, with little scales: the *head* is less sharpened: the *mouth* is wide; the lower *jaw* longer than the upper: the forehead somewhat pointed: the *teeth* and *tongue* are similar to those of the bonnet, however the former are more distant from each other: the *opercula branchiarum* consist of two large round plates: the *eyes* are large, round, and silver coloured. It trembles as it dies. The vessel that is the conduit to the gall is formed like a worm, and is blueish. The *belly* is oblong.

The tunny is caught in the same places, and much in the same manner, as the bonnet; they are equal in size, and are both eaten.

A LARGE ſort of fiſh, called the *Springer* in Swediſh, ſhewed its back fins above the water near the ſhip.

April the 7th, 3° 47′ N. L.

WE caught the *dog-fiſh* to-day, which is reckoned the moſt voracious animal of prey. Authors have already deſcribed ſeveral kinds of them, though not very clearly. The reaſon thereof is probably that ſome ſorts are nowhere to be found but in great ſeas, where they can be but ſeldom examined by inquiſitive people; whence all ſorts are called by the ſame name, becauſe they all look alike at a diſtance. Very ſeldom does an opportunity offer of comparing ſeveral ſorts together, that ſpecific marks might be aſcertained, which otherwiſe is difficult, as their fins do not conſtitute the only difference. The dog-fiſh moſt commonly met with about the line is

THE *Squalus conductus*, *Squalus Canicula*, (Linn. Syſt. Nat. p. 399. n. 8.) or the greater dog-fiſh.

Its

Its *length* is five feet: the *body* is of a blueiſh grey above, and white below: the *head* is flat, with a ſhort, half-round forehead: the lower *jaw* has four rows of ſerrated teeth: the *mouth* is lunular, large, about an inch from the point of the head: the *tongue* is thick, round before, and dentated: the eyes were covered on both ſides with a ſkin after its death, excepting one croſs ſtripe, which was to be ſeen in the middle. The *ventral* fins are near the *anus*, they are broad, ſhort, blunt, and in ſome meaſure connected: the *anal* fin is ſhort, and in the midway between the *anus* and the tail. At the tail there is a triangular cavity. The *pectoral*, *ventral*, and *anal* fins are white, with black points; the others are of the ſame colour with the body, but they have white points. It is viviparous, and is caught on very large hooks, which have a joint not far from the hooks, faſtened to ſtrong ropes: on this hook you put a large piece of bacon, or half a chick, or ſomething which the fiſh ſwallows greedily. It is very tenacious of life; and will move about, though its head or tail be cut off; from the wound the blood guſhes as out of a ſpout; nay even if the bowels be taken out of its belly, it lives more

than an hour, as we saw when we caught it. In its belly were bonnets, sepiæ, and whole chicken with feathers, which we had thrown over-board when dead. When a dog-fish is caught, it flounces about the deck; and people must take great care, for with its teeth it is said to bite off a leg with great ease, at least it would not be safe to try the experiment. When the seamen want to get into a boat where these fish frequent, they must take care not to put their feet into the water, for I once saw a dog-fish attempting to swallow a large wooden quadrant, but it was not able to do it, as it was too broad, and therefore only left the marks of its teeth on it. It is owing to its great greediness that the seamen are able to catch it: they cut off its fins, and then throw it again into the sea; besides many other cruel tricks, which I shall pass over. If a sailor dies in a place where dog-fishes haunt, and is thrown overboard, he is sure to be buried in the bellies of some of them. Large dog-fishes are never eaten, and small ones but seldom, and in cases of necessity only. They are cut into slices, which are squeezed in water till no train-oil remains in them: after being thus washed, it is boiled or roasted, and eaten with butter: the part towards the tail is the best;

the

the fore-part is ſeldom eaten. The ſkin and fins are made uſe of in poliſhing, and are called *ſhagreen*[f]; they are found in plenty in the Chineſe apothecaries ſhops, and in other places. In the head, above the eyes, in two cavities, is a thick white matter, which, the ſkin being taken off, is taken out, dried, reduced to powder, and uſed as an *Emmenagogue*.

THIS dog-fiſh had two companions:

Echeneis Remora, Linn.

THE *membrana branchioſtega* has nine parallel bent rays, which are black, as well as the *opercula branchiarum*. The length of the fiſh is about one ſpan: the *dorſal* fin has twenty-two rays; the *pectoral* fins twenty-ſix each: the *ventral* fin, which is joined together by a ſkin, has five rays: the *anal* fin is oppoſite to the dorſal, and has twenty-one rays: the *tail* is ſickle-ſhaped, and has about ſixteen rays. The whole *body* is covered with a black ſkin; but young ones have a greyiſh-white ſkin, ſhaded with black. The *head* is flat: the

[f] True ſhagreen is part of the ſkin of a wild aſs, and is brought from *Turky*.

teeth are in two rows in the gums, and on the tongue; the upper *jaw* is the ſhorteſt: the *eyes* are ſmall; their *iris* is white. From the foremoſt point of the head, to the point of the pectoral and ventral fins, runs a *ſkin*, or elevated flat *ſhield*, which is oblong, hangs on the back, is as broad if not broader than the fiſh itſelf, but its ſmooth margin is never faſtened. This fiſh faſtens itſelf on the belly or breaſt of the dog-fiſh with this ſkin, which conſiſts of eighteen rough, double-creſt-like, tranſverſal lines, cut in-two length-ways by a middle line. The fiſh which *Artedi* deſcribed was much larger than I ever found any. It often ſticks ſo faſt to the dog-fiſh, that it is pulled upon deck along with it.

April the 8th, 2° 49′ N. L.

Pilots are a ſort of ſmall fiſh which are ſimilar in ſhape to thoſe mackarels which have a tranſverſal line acroſs the body. Sailors give them the name of pilots, becauſe they cloſely follow the dog-fiſh, ſwimming in great ſhoals round it on all ſides. It is thought that they point out ſome prey to the dog-fiſh; and indeed that fiſh is very unwieldy. They are

not

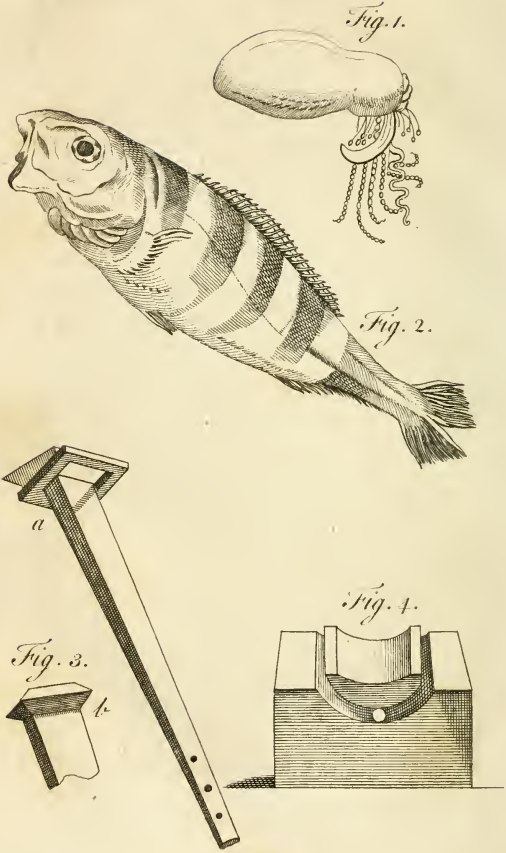


Fig. 1. HOLOTHURIA Physalis.
2. GASTEROSTEUS Ductor.
3. a chinese pair of Tongs.
4. a chinese Roller or calender.

not only not touched, but alſo preſerved by it againſt all their enemies. Pſalm cvi. ver. ii. "*Who can utter the mighty acts of the Lord? "Who can ſhew forth all his praiſe?*" This ſcarce and remarkable fiſh I had an opportunity of deſcribing: it is *Scomber cæruleo-albus cingulis tranſverſis nigris ſex, dorſo monopterygio.* See the Memoirs of the Swediſh Academy of Sciences, for the year 1755, vol. xvi. p. 71. of the Swediſh edition. Or

Gaſteroſteus Ductor, Linn. Syſt. Nat. a ſpecies of ſtickle-back. *Pilote piſcis*, by Ray Piſc. 156. Vid. tab. 12.

The *membrana branchioſtega* has ſix rays: the *operculum branchiarum* conſiſts of two entire griſtles: the elevations on the ſides of the tail are ſharp and ſoft: the *dorſal* fin begins on the middle of the back and ends near the tail: it has thirty rays, whereof the three firſt are hard, ſhort, and ſcarcely perceptible; the next following are longer; but the reſt keep decreaſing, and are divided: the *pectoral* fins are ſmall, and have nineteen rays: the *anal* fin has ſixteen rays: the tail is furcated, and has twenty-ſix rays, with black tops: the head is narrow: the forehead is blunt: the jaws are about equal in length, yet the lower

ſeems

ſeems longer when the fiſh opens its mouth: the *mouth* is oblong and ſmall: the *teeth* are very ſmall, and very numerous in the jaws; in the palate are none: the *eyes* are ſmall and round: the *pupilla* is black; the *iris* is ſhining like gold and ſilver: the *back* is blue, the *belly* is a ſilver colour: the *head*, the belly, and even the tail, are ornamented with ſeven blueiſh black lines: the ſcales are extremely ſmall, and ſtick very faſt.

The 10th of April, 1° 50′ N. L.

THE *Southern-croſs*, called the *Croziers* by the *Engliſh* ſailors, is a conſtellation conſiſting of four ſtars, of which two are of the ſecond, and two of the third magnitude. It is ſituated at the hindmoſt part of the conſtellation called *Centaur*, which appears on the ſouth ſide of the line, as ſoon as the polar ſtar diſappears. This croſs we now began to diſcover.

The 11th of April, 8′ N. L.

IN the afternoon we paſſed the Line. On this occaſion the old cuſtom was obſerved; namely,

namely, all the men were called upon the deck, and ſome pails full of water were thrown upon thoſe who had not croſſed the Line before, and thoſe who have very often partake of the bathing. It appears from *Holms's* Deſcription of New Sweden, that this ceremony was uſual in 1642, on his voyage to *America*. The firſt cauſe that gave riſe to it is unknown. It is true, in the neighbourhood of the Line, it is uſual to waſh the ſhips every morning and evening with ſea-water, that the intolerable heat may be leſs noxious; which, particularly if the ſailors drink brandy, is ſufficient to make them mad. But we cannot from hence derive the ceremony of drenching them in water, as it is a practice more likely to occaſion diſeaſes than to prevent them.

AFTERWARDS all thoſe who had been here for the firſt time collected a ſum of money among themſelves, to ſerve as a treat at a *Gothenburgh* tavern, in caſe they ſhould return; and it amounted to three hundred and ſixty-four copper dollars, and fifteen ocres. Another collection was made for the orphan-houſe at *Gothenburgh*; every one contributed to it, and it amounted to eight hundred and thirteen copper dollars, and twenty-four ocres.

The 14th of April, 5° 16′ Southern Latitude.

The wind called *the ſouth-eaſt trade-wind* was of great uſe to us at this time. This wind has this name becauſe it blows from the ſouth-eaſt, or nearly, all the year long. It forwards the ſhips on the ſide of *America* very much, till they get a weſt wind at about twenty-two degrees of ſouthern latitude, which carries them on ſtill farther.

April the 26th.

About half an hour after nine we paſſed the tropic of *Capricorn*. We ſaw flying-fiſhes (*Exocœtus volitans*).

May the 2d, 31° 19′ S. L.

Malmucks was the name given to a ſort of brown gulls, with ſhort wings and white bellies, which flew about the ſhip; and we ſaw them afterwards in other places, but were never able to catch one of them.

The

THE ſouth-eaſt wind, which generally turns weſt about the tropic, did not turn before laſt night.

May the 5th, 33° 16′ S. L.

SEVERAL ſorts of birds flew about our ſhip, and in particular the *Albatros*, or *Diomedea exulans:* their ſize is that of a gooſe; they are white every where, excepting the quills and tail, which are black at the end, but white at bottom. We found them alſo in other places, viz. in thirty-ſix degrees, and likewiſe in thirty-five degrees and eighteen minutes of ſouthern latitude.

CAPE *Pigeons* are a ſpecies of birds ſo called by mariners; they only reſemble pigeons in ſize: their country is the *Cape of Good Hope.* A great many of theſe birds flew to and fro, and kept us company as far as the ſouthern tropic. This bird is the

PROCELLARIA *Capenſis* Linn. or the middling ſpotted Petrel of Edwards's Birds, 90. t. 90. part 2. The following is its deſcription:

The

The *ſize* is that of a common dove: it has very fine black and white down on its *body*: the *bill* is black, narrow, conical, and ſhort: the *upper jaw* is pointed, bent, and gibbous in the middle near the noſtrils. About the *noſtrils* are elevated *lines* running lengthways, but not parallel: the *lower jaw* is ſtreight, flat, ſomewhat elevated on the point, not very ſharp-pointed, compreſſed, and has parallel inciſions towards the point; below covered with a ſkin of a dirty black colour: the *ſkin* within the bill is whitiſh: the *teeth* are foliated, and ſtand croſs-ways: the *tongue* is whitiſh, ſmooth, lacerated near the baſis, broad, truncated at its extremity, and fits the bill exactly: the *epiglottis* is furcated: the body below is quite white. The *head* and all about the eyes is covered: the *upper* part of the *neck* is black, as is likewiſe the fore part of the back; becauſe the feathers are grey, with black tips: the hindmoſt part of the back is black, ſpotted with white, and the feathers are white with black extremities: the *under* part of the neck is commonly white, but ſometimes a little blackiſh, when the feathers have black tips. This is perhaps a difference of ſex. The *wings* are long; below white,

white, with white ſides; on the upper ſide black with two large white ſpots: the *quills* are white with black points; the three *firſt* are the longeſt; twelve or more *leſſer* ones are joined by them, and next to theſe again ten longer *ſecondary* ones: the outſide of the quills is black; as the next decreaſe in ſize, ſo their black margin decreaſes, and the reſt of the ſhort ones have only black tips: the *greater coverts* of the wings are white with black tips, and the *leſſer* ones are quite black: the *lower* coverts are quite white, except thoſe at the extremity, which are black. The fourteen outward feathers of the *tail* are ſhort, and white with black tips; the others are of the ſame number, and are covered at the top and below: the *thighs* are covered to the knees, partly with the vent feathers, and partly with their own down: the *toes* are palmated, and, like the legs, of a dirty black colour: the *web* of the toes is very ſlightly notched: the *outward* toe is the longeſt, and has five articulations; the middlemoſt has four articulations, of which thoſe two which are neareſt the baſe of the toe are white on one ſide: the outward toe of the three fore toes has but two joints, and is whitiſh on the inner ſide: the fourth or *back toe* is the ſhorteſt, for

it

it has but one joint or nail; the laſt articulations of the toes are hooked (*hamoſi.*)

This bird makes a noiſe like a parrot, and throws up train oil when touched. It is caught without any trouble, with ſome tarred ſtring, or a piece of lard on the fiſhing-rod. They are ſeldom eaten, and only in great neceſſity. We once boiled and taſted ſome of them, but they were extremely oily.

The two congeries of ſtars, of which the one which is near the *Polus eclipticæ* is called *Nubecula major*, and the other *Nubecula minor*, are well known to our *Eaſt India* navigators [f]. They obſerve how the one, which appears at night lower on the horizon, gradually mounts up higher than the other; and from this they can tell the hour of the night on the ſouth ſide of the Line, as our common people can by the turning of the *Great Bear*.

May the 6th, 34° S. L.

We were obliged to dreſs in our winter cloaths, for the cold was no leſs intenſe than

[f] Our ſailors call them the *Magellanic clouds*.

in

in *Sweden* in winter time. This change occasioned many diseases, and no less than twenty-two men were laid up at once, most of them having an ague; some had the head-ach, and others different complaints.

The storm-finch, (*Procellaria æquinoctialis*) has got this name from seamen for shewing the bad omen which its appearance forebodes. A couple of these little birds accompanied us, and always flew quite close to the surface of the water, if the sea was ever so rough. We saw them likewise the following days.

May the 16th, 36° 22′ S. L.

The trumpeter, *Zetermark*, a comely and decent young man, died about noon of an ague, and was buried in the sea, about four o'clock in the afternoon.

May the 18th, 36° 8′ S. L.

Although the abovementioned storm-finches were but very small, yet they were bold enough to feast along with the large sea-birds, when we threw the guts of pigs over-

board. They were generally firſt and laſt on ſuch an occaſion.

May the 21ſt, 35° 15′ S. L.

We caught a ſort of dog-fiſh to-day, which I have often heard of: it was by far larger than any of this kind we had ſeen till then: its colour was grey, like ſteel, and white below.

This *Squalus catulus*, Linn. or leſs dog-fiſh, had the following characters:

The *body* without the tail is eight feet long: the *colour* of the back is grey, like lead, and that of the belly white, without ſpots: the *mouth* is thin, oblong, and near it are two ſmall noſtrils: below the head it has ſeveral ſmall *apertures:* the *teeth* ſtand alternately, and their edges are ſlightly indented: the upper jaw is the longeſt: the teeth in the firſt row are ſtreight, like thoſe of the above deſcribed dog-fiſh (*Squalus canicula*), but they are more ſharp pointed, and larger below: the teeth of the ſecond and third rows are bent: the eyes are black, ſhining, and quite covered with a white ſkin, as ſoon as the fiſh is dead:

dead: both *dorſal* fins are ſhort, and of the colour of pewter: the length of the *pectoral* fins exceeds a foot: they have parallel margins, but a joint on the inſertion; they are white below, and above of the ſame colour with the back: the *ventral* fins are joined near the anus; they are white, ſhort, and cylindrical at their inſertion: the *anal* fin is of the ſame colour with the dorſal fin, and is very ſhort: the *tail* is two feet long, and lead coloured. This whole animal ſhines, and is covered with a fine ſkin. The heart and the eyes were in motion a long while after it ſeemed to be dead. One of its bowels was like a long ſtring of pearls, the joints of which were of the ſize of acorns, and contained thick blood. On one of the pectoral fins many *chryſalides mucronatæ*, *thorace imbricato*, were fixed. But the pilot-fiſhes which accompanied the *Squalus canicula* did not attend on this ſpecies.

May the 22d, 35° 14′ S. L.

It is in this latitude, that a ſeaman muſt be more cautious than any where elſe, for the leaſt cloud often changes the fineſt weather into

ſuch a ſtorm, that the bare maſts are ſufficient without any ſails.

The continent of *Africa* began now to appear to us, between N. N. E. and E. N. E. About five o'clock in the afternoon we buried one of our men, who died of an ague. We now thought that *Cape Falſo*, as being the neareſt land, was eight or nine miles off, N. by E. We found that (by heaving the lead) we had ground at ninety fathoms depth; and here we fiſhed for cod, but in vain.

May the 23d, 35° 46′ S. L.

About one o'clock in the afternoon, we again found ground at ninety fathoms depth. The effects of the deceaſed were ſold by auction.

May the 25th, 36° 56′ S. L.

One of our men, who had been ſick for ſome weeks together, died of an ague, and was buried the next day before the ſermon.

May

May the 27th, 37° 19′ S. L.

Six dolphins [h] followed our ſhip, and generally were on the ſurface of the water. I never ſaw a finer fiſh than this for the variety of its colours. The dolphin is the ſame in a large ſize, as the gold-fiſh is in a ſmall.

May the 29th, 37° 33′ S. L.

This morning, about two o'clock, I ſaw an eclipſe of the moon, which began on the ſouth-eaſt ſide, and continued till three quarters paſt three o'clock, when only the north-weſt border was eclipſed. The moon after-

[h] The reader muſt here take care not to confound this dolphin (which is the *Coryphæna hippuris*, Linn. and the *Dorado* of the *Portugueſe*) with the dolphin of the ancients, (*Delphinus delphis*, Linn.) which is a cetaceous fiſh. If by *gold-fiſh*, Mr. *Oſbeck* means, as we do, to expreſs the *Cyprinus auratus*, Linn. one cannot but wonder that ſo good a naturaliſt ſhould uſe ſo little preciſion in his account as to ſay, "The dolphin is the ſame in a large ſize, as &c." merely from the reſemblance of colour: for the *Dorado* and gold-fiſh are ſo little alike as to be not only of different *genera*, but alſo of different *ordines*: for the former is a thoracic fiſh, the latter an abdominal.

wards continued to increaſe on both eaſt and weſt ſide, ſo that ſhe was full about five o'clock. Yet before the end of the eclipſe, a fog, as the certain fore-runner of an imminent ſtorm, began to increaſe more and more; and the ſtorm accordingly happened when the ſky was quite covered.

At a great diſtance from the ſhip we ſaw ſome animals which were ſaid to be *ſea-lions*; but I could not diſtinguiſh whether they were fiſh or *belluæ marinæ*. According to the figure of the ſea-lion in Anſon's Voyage, it ſeems to be a ſpecies of ſeal. Thoſe which that admiral caught and uſed as proviſion near the iſle of *Juan Fernandez* were twelve or twenty feet long, and eight or ten thick.

June the 7th, 37° 30′ S. L.

About eight o'clock at night we heard, at ſeveral times, a deep and harſh noiſe. We ſuppoſed this was the voice of ſome large fiſh, and perhaps of that which we ſaw the next day. Some ſaid that they ſaw its way, and that it ſhone a little in the dark. This light might probably ariſe from the violent motion which

which its ſwift paſſage gives to the water; for in the night ſomething ſhone about our ſhip: yet this might alſo be occaſioned by many ſorts of little worms, dead fiſhes, and other putrified bodies.

June the 12th, 36° 54′ S. L.

THE ſea raged exceſſively, and was driven by the wind, as the ſnow is on the land. The colour of the waves, and their height indeed, reſembled hills of ſnow. At three o'clock in the afternoon a great body of water burſt into the cabbins through the windows, and ſpoiled all the ſugar, cloths, books, &c. which it met with. This accident put us into great confuſion. Such was the reception we met with at the rocks of *St. Paul and Amſterdam*, from whence, the next night, a ſtorm attended with hail ſo effectually helped us away, that the reefed mizzen and fore-ſails only, were ſufficient, whereas at other times we were obliged to add twenty more ſails.

June the 14th, 35° 16′ S. L.

WE ſaw ſome ſea-graſs ſwimming by the ſhip; it was perhaps a *fucus*, for our navigators

call this whole genus ſea-graſs; which is one of the ſureſt ſigns that rocks, iſlands, or lands, are near.

June the 15th, 34° 1′ S. L.

Anas *nigra* Linn. or a *Scoter*, almoſt of the ſize of a gooſe, was ſeen to-day, and afterwards in thirty degrees of ſouthern latitude. They look brown at a diſtance; the head and feet black; and the bill white: the wings are greyiſh at top, but blacker below.

June the 21ſt, 30° 49′ S. L.

We aſſembled as uſual to attend our morning ſervice; but a ſudden ſtorm made us leave off, when we had ſcarce begun.

June the 22d, 29° 34′ S. L.

A Grampus, or great fiſh of ſome fathoms length, which ſwam about the ſhip backwards and forwards, once ſwiftly paſſed before her, though the ſhip ſailed very faſt; but at laſt was forced to give the precedence to us; where-

whereupon it (and perhaps ſome others in its company) ſpouted the water up to ſuch a height, that it was both heard and ſeen at a great diſtance.

July the 3d, 23° S. L.

THE ſea being ſmooth, our ſailors were employed in cleanſing the ſhip.

SOME of the *Lepas anatifera* Linn. had faſtened themſelves during our voyage to the ſhip, and particularly to the rudder, but were now all deſtroyed. As ſoon as the water paſſes over them, they ſtretch out their *tentaculæ* like hooks to get their food by, which is either the *conferva rivularis* which grows about them, or ſome other things which the water carries to them. The reaſon which made the ancients call this lepas *Concha anatifera*, appears from *Grew's* Muſeum, p. 148. where he ſays, that ſome aſſert it as a certainty, that in the *Orcades* were ſome worms, which grew in hollow trees, and got, in time, a head, feet, wings and feathers, as perfectly as a ſea-bird; and that they became as large as geeſe[i].

[i] Dr. *Grew* did not believe this abſurd tale of the *Bernacle*; but old *Gerrarde* aſſerts, that he has ſeen with his own eyes the ſeveral ſtages of this metamorphoſis.

The

The animalcules inhabiting it had the following ſhape:

THEY are of the *Triton* kind, and have ten pair of comb-like arms, which are bent towards each other like ſkrews, are black or grey, connected together at bottom, and are an inch long; each pair is inſerted below, and entire. Beſides theſe ten pair of arms, there is a ſingle arm in the middle, like a worm, which is hairy at the top, and is perhaps the inſtrument they make uſe of to bring that kind of food to their mouth which they catch by their *tentacula*. Beſides, there are a pair of arms on each ſide, which are like the abovementioned ten, but ſtand a little more off, are ſhorter, and as clear as water. The mouth conſiſts of ſeven valves, which are ſerrated on the inſide: on the ſides of the mouth are ſome ſcales, that are like the former; they all ſtick to an oblong bladder: the ſhell ſticks to the ſhip by means of a wrinkled leather-like tube, made of a ſpongy ſubſtance, which is tough and blueiſh, and has ten or more wrinkles: its ſhell is of the *lepas* kind, bivalve [k], oval, compreſſed, water coloured,

[k] Linnæus in the laſt (twelfth) edition of his *Syſtema Naturæ*, aſcribes to the *Lepas anatifera* five, ſmooth, compreſſed valves. F.

and

and with yellow futures; each valve is divided in two by a croſs future, of which that is the leaſt which forms the ſummit: the ſide which opens has yellow linear edges: but the back deſcribes almoſt a circle: the ridge of the back is brown, and has on both ſides black and yellow futures: the bottom is ſaffron coloured.

Adelphozion I call a ſpecies of worms which were joined together in the water by hundreds, and we at firſt took them to be ſnakes; but when we caught them by a hook they parted: each of them was an inch long; ſcarce as broad as a finger; had compreſſed ſides, and at firſt ſight looked like a little fiſh without fins: the whole body was ſoft, pellucid, but a little more ſolid at the ends: there were no bones in them, and only a fine ſinew or ſide line; and a red brown edge quite in the middle ſomewhat diſtant from the ſnout. As I wanted time and opportunity to conſider them more attentively, I preſerved ſome in ſpirits, and others in ſea water; but they loſt their former figure in both. I afterwards ſaw a drawing of many worms connected together, at Mr. Aſſiſtant *Braad's*, who met with them in his voyage to *Suratte*, in the ſhip called

The

The Gothic Lion, which perhaps only differed from theſe in age; but they had, for the moſt part, a rhomboidal figure.

July the 6th, 19° 5′ S. L.

We were come ſo far, that we expected to ſee *New Holland* ſoon; but were diſappointed, and fell into a very good trade-wind.

July the 9th, 14° 15′ S. L.

Two tropic birds (*Phaëton æthereus*), ſo called by ſeamen becauſe they live within the tropics, were obſerved ſoaring in the air at a conſiderable height, as larks do. They ſeemed to be large and white, with a long narrow tail, conſiſting of a few feathers, with ſmooth, black edges, and a red bill. The deſcription of this bird may be met with further on.

July the 11th, 9° 37′ S. L.

One of the greateſt inconveniencies that attend a voyage to the Eaſt Indies is, that worms ſpoil both meat and drink. In our ſhip-

ſhip-bread ſome worms had lived ever ſince the beginning of May, and they now were of the following figure: the larva was white, ſomewhat hairy, and had a briſtly tail: the fore part was flat; the hind part cylindrical: the three pair of feet were yellowiſh, and fixed near the head: the body has twelve articulations, the head included. The whole head, with the next articulation, and the tail, are dark brown: the jaws are prominent: the *antennæ* ſhort and ſetaceous. I have alſo found ſmooth ones, leſs than the former, of a light brown colour, and middling ones likewiſe ſmooth. The head and tail of the latter was brown: but the former was not punctated; and the articulation neareſt to the head was not brown as in the former. Perhaps theſe are only varieties ariſing from different ages.

July the 12th, 7° 53′ S. L.

We now got ſight of *Aſia*, and firſt of all of the iſle of *Canibas*, the eaſtern point of which was about twelve o'clock N. E. by N. the weſtern N. and the middle N. N. E. and it was reckoned two or three leagues from us. The eaſtern part of *Java* was to us E. N. E.

N. E. and the weſtern N. N. W. We afterwards ſailed along the coaſt of *Java*.

Some thouſands of porpeſſes (*Delphinus phocæna*) were playing about our ſhip, and made a great noiſe in leaping. They ſeemed a yard and half long, and of a ferrugineous colour: the *tail* is horizontal, and the *dorſal* fin lacerated behind.

The air was very cold here at firſt, though the climate is one of the hotteſt. This perhaps may be occaſioned by a draught of air between the mountains.

The country is covered, both vallies and hills, with green trees, the reflection of which gives a green caſt to the ſea, even at a diſtance from land. The ſun ſhone very hot, ſo that a vapour roſe from the land like the ſmoak which is ſeen in our country when woods are burnt down; yet the air along the coaſt was very cold.

July the 13th.

Bubbi, from the *Engliſh* word *booby*, is a ſort of bird ſo called by thoſe of our nation who

who ſail to the Eaſt Indies, becauſe, though they frequently ſettle on ſhips, yet they never fly away if any one attempts to catch them; but only cry out, bite, and ſpout out the train-oil, or fiſhes, which they have ſwallowed. Such a bird we caught to-day with our hands, which enabled me to know it better than merely by name. It was the male of the

Pelecanus *Piſcator* Linn. Its *bill* is pointed, elevated, narrow, blueiſh on the outſide, has a ſerrated margin, and is two palms long: the *throat* and all about its eyes are without feathers, and covered, as the bill, with a blueiſh ſkin: the *upper jaw* is elevated, and has on both ſides a furrow running towards the *point*, which is bent, and has a prominence: near the head the bill has an elevated part: the *lower jaw* is narrow and ſtreight; the tongue, which is faſtened to it, is arrow-ſhaped: the *cere* is light blue: the *noſtrils* are wanting, unleſs the notch at the baſe of the bill can be taken for them: the *pupils* of the eyes are black: their *irides* are white, and ſurrounded with black: the *head*, the neck, back, the upper ſide of the wing, and the inner margin thereof, together with the tail, are quite black: the *breaſt*, the belly, and

and the *uropygium* are white, waved with blackiſh grey: the *down* and the *lower coverts* of the wings, in particular the ten longeſt and innermoſt, are white: all the ſixty-four *quill feathers* are very black, with whitiſh grey below: the firſt quill feather is the longeſt; the next to it decreaſe gradually: there are ten quill feathers on the firſt joint; on the ſecond thirty; and on the third or innermoſt fourteen; and more ſecondary feathers. The *upper coverts* are tipped with grey: the *lower* are dirty white, with little black edges: the tail has fourteen feathers: the *thighs* are covered with grey feathers: the legs naked and whitiſh, like the four toes: the *firſt toe* has five, the *ſecond* four, the *third* three, and the *fourth* two joints: no *back-toe* is to be met with: the *heart* is oval; the *liver* is long. The bird is the ſize of a raven.

The *female* is ſomewhat leſs: the *bill* is more ſerrated, and reddiſh towards the head: the *neck* and the *upper coverts* of the wing are white: the three firſt quill feathers are quite black, as in the male: the next following ones are grey, ſpotted; and the laſt white, mixed with black: the *back*, the *coverts of the wings*, and the thirteen *feathers of the tail* are white, ſpotted

ſpotted with a reddiſh yellow: the middlemoſt feather in the tail is the longeſt: the *tocs* and *legs* are red: the reſt the ſame with the male: Whether this is the female of the firſt deſcribed bird, I leave to others to examine. It may be compared with the *Anſer Baſſanus* of Albin, vol. i. p. 86. I found a black [k] *Hippoboſca* upon it.

Both theſe birds were exceedingly lean, and not eatable on account of their oily taſte. In flying they ſpread their tails like a fan, and bend their long necks towards the ſide they fly to. They ſettle upon ſhips, and ſometimes ſtay on them (if not ſcared away) whilſt they ſail many miles. They are much plagued with lice, and for that reaſon are not agreeable to keep. Theſe lice run very ſwiftly, and ſoon creep upon the men. They are ſmall and white, and black on the middle: ſome are brown; and ſome have four long feet.

At five o'clock in the afternoon, *Wincopers* point was N. by W. and the middle of the iſle N. N. E. to us. *Flying-fiſhes* were to be met with here.

[k] *Hippoboſcæ* abound on the *Hirundo apus*, or ſwift.

On a little isle, which we passed by in the dark, we observed strong breakers.

July the 14th.

To-day we had clear weather and but little wind. In the afternoon, at four o'clock, we found ground at ninety fathoms depth.

The Cape of *Java*, which we passed at nine o'clock before noon, was at first N. N. W. to us, and at ten it was N. by W. This high steep promontory is called *Java head* by the *English* sailors and ours, or the *Pico* of the *Prince Island*. It is on the right if you are sailing into *New Bay*, which is the first port in that road. This mountain is of a brown red colour. Near *Java head* is a neck of land every where covered with trees, and therefore is entirely like that side of *Java* which we passed by. Higher up the country the ground was rising, and the palm-trees were taller than I ever saw any where else. In a few places we observed, between these thickets, some spots of ground the surface of which appeared quite yellow from the blooming flowers: this gave a charm-

a charming appearance to the country, but increaſed my chagrin as I was not to go on ſhore; and I was forced to languiſh like a hungry perſon who views his food only at a diſtance. Theſe woods are ſaid to be ſo full of tigers and other beaſts of prey, that nobody ventures to live on the eaſtern ſhore of the iſland. At night it was extremely agreeable upon the decks, for we were refreſhed by the ſweet ſmell which exhaled from the trees and other vegetables. We were viſited by many little white birds, like our gulls, which fluttered about us and whiſtled; and afterwards another larger ſort of birds came to us, but ſoon after left us.

Nieu *Eyland*, or the *New Iſland*, whence the new bay, or the new road, derives its name, is the place where the *Swediſh Eaſt India* company's ſhip *The Gothic Lion* (which had loſt the trade-wind) was obliged to ſtay, and whence all our ſhips on their return fetch freſh water; and even on their voyage from *Europe*, if in want of it, or if detained by calms or by contrary winds. At eleven o'clock we had a coral bottom, twenty fathoms depth.

The second port in *Java* is *Welcome bay*, the third *Pepper-bay* and the fourth *Angeri*, which are all on the right coming from *Europe*. On the left or south side is *Prince Island*, which is said to be very populous, and belongs to the king of *Bantam*. From this island the ships of other nations take water for their return, as the *Swedish* ships formerly did: but they have since found *New-bay* more convenient for that purpose.

Summatra, which we saw at a great distance behind *Prince Island*, is much larger than *Java*, and is computed to be two hundred *Swedish* miles long[1]. The country was on this side like *Princes Island*, and for the most part covered with thick woods, between which were some open places.

On the shore of *Java* we saw some small reddish rocks, and sea-turtles on the water. In the evening the sky was covered with some clouds shining like gold, upon which rain and thunder ensued. The inhabitants along the shore lighted several fires to frighten wild

[1] That is, about one thousand two hundred and fifty *English* miles. F.

beasts

beasts from their huts. About eleven o'clock all was silent, and we anchored in the fourth harbour, viz. *Angeri*.

July the 15th.

The thunder clouds lay low on the mountains, so that the high rocks were prominent above them. Thunder and lightning, together with rain, ensued.

We weighed anchor at eight o'clock in the morning, having had *Angeri* point N. N. E. and the island called *Quer im Wege* (that is *Across the way)* between N. and N. by E.

The isle of *Kraka toa* was to the left of us. About nine o'clock we cast anchor; we had fifteen fathoms depth, and a clayey ground, on which lay little shells. We had the fourth bay from *Java*, between S. and S. by E. The before mentioned island N. E. and *Angeri Point* N. E. by E.

Some moths came aboard our ship and were caught, viz. *Sphinx atropos* Linn. or the *Jasmine Sphinx:* its *upper wings* are black, with

whitiſh ſpots; but at the extremity of an orange colour: the under ſide of the upper, and both ſides of the lower wings, have black lines: the *antennæ* are blackiſh, priſmatic, and have a brown ſpot on the point: the *eyes* are large and black: the *back* of the *thorax* is marked with a blackiſh brown figure like a ſkull: the *body* is black below, with orange rings: it is marked at top with rings of black changing into blue: the *feet* are ſhaded black and brown; and their ſpines, which ſting like nettles, have the ſame colour: this *Sphinx* has a ſtrong ſpiral tongue. When caught, it made a noiſe ſomething like a bird.

At half an hour after four in the afternoon we ſailed, and about ſix o'clock we dropped the anchor at ten fathoms depth, in a blue ſandy, clayey ground.

The iſland called *Acroſs the way* was now N. N. W. and *Angeri* S. by E. We ſaw two fires on the coaſt of *Java*.

July the 16th.

For the greateſt part, calm and fine weather.

About

About eleven o'clock we weighed anchor, but ſoon after dropt it again, at a moderate diſtance from *Angeri*. Here at laſt I got leave to go on ſhore with the boat, which fetched ſome refreſhments for our men, ſuch as cocoa-nuts, &c. but only on condition of returning immediately as ſoon as the commanding officer ſhould deſire me. We had provided ourſelves with fire arms in caſe of a bad reception.

As ſoon as we reached the land (which we did with great difficulty, on account of the coral bottom, and becauſe the tide ran very much to the ſhore), ſome natives of the country met us: theſe at firſt ſeemed undetermined whether to look upon us as enemies or as friends; for they were then at war with the *Dutch*. Each of them had a dagger on his ſide, which looked like a kitchen knife hung in a belt, and its point was made poiſonous by the *Toxicaria* of *Rumphius*. One of them carried a couple of javelins on his back, and a cane in his hand. They were almoſt naked, being covered with nothing but a brown cotton cloth, ſpotted with blue, tied round the body with a handkerchief; between which their dagger is put. With theſe poiſoned daggers

they cut the cocoa-nuts, and other things; but they likewise defend themselves against their enemies with them. Round their black hair they wear a check handkerchief tied, yet so that the crown of their head remains uncovered. When they came on-board they sometimes dressed themselves in a loose shirt, which was commonly blue or check. Some of them wore on their fingers brass rings with seals of stones like blue saphires. These Indians were of a middle size, but generally short; their hair and eye-brows black, their teeth of a blackish red, their eyes and noses little, their mouth large, and most of them had no beards. They were civil, grave, simple, and willing to oblige; but cried like children if any thing was taken from them. They want no chairs, because they sit upon their heels like monkeys. Their salute is *Taba tuani*, or Good day to you, Sir. At last they offered us their cocoa-nuts, plantains, chicken, beer, buffaloes, tortoises, and bed-mats; which latter were either *double*, that is, such as have larger meshes on one side; or *single*, which are always brought here and used as sheets, on account of their coolness. In payment they received *Spanish* silver money, or wares, such as old shirts, handkerchiefs,

kerchiefs, mirrors, glaſs, knives, pins and needles, flints, &c.

The ſea-ſhore here conſiſts of a grey ſand, in which are ſeveral corals, ſuch as madrepores, millepores, &c. as alſo ſhells, viz. *Cypræa alba* and *Cypræa punctata*, two ſpecies of *Cowries*, were found here. The country was ſcarce a yard higher than the ſurface of the water. A number of ſmall crabs ran very nimbly on the land.

A little hut, conſiſting of four poles, open on the ſides, but covered with cocoa leaves at the top, and uſed for fires at night, was found on the ſhore. The people live ſo contented here amongſt apes and parrots, that the ſtateliеſt palaces in *Europe* do not contain ſo happy inhabitants.

All the trees are different from thoſe which are found with us, and ſtand ſo cloſe together on the ſea-ſhore, that it is almoſt impoſſible for a ſtranger to penetrate into the country.

The inhabitants of *Java* had a little path through the wood, but they forbad me going through it. They accompanied us to-day along

along the shore towards the side of *Angeri*, on a brook which was about the distance of a gun-shot from our boat, where we filled a tun full of water, which was not very good. On the side of the brook stood a tree of about ten or twelve feet high, which had both flowers and fruits, and which the *Indians* called *Vientaro:* it is *Cerbera Manghas*; the *germen* is oval like the *stigma*, which is bifid: the *outward shell* of the fruit contained a milky juice, which raised a suspicion of its qualities; and besides, the people of the country more than once told us that it was poisonous. It may be compared with the *Arbor lactaria*, Malaicè *Bintaro* Rump. iii. p. 234. and *Jasminum Indicum, Merian Surin.* p. & t. 8. *Quauthlepatli s. Arbor ignea.* Hern. Hist. Mex. cap. xxxiii.

The other plants which I gathered here, were

Acanthus ilicifolius: the *perianthium* is double: the *outermost* is less; and both of them have two opposite leaves somewhat larger than the rest: the four *stamina* are shorter than the *corolla*, and two of them longer than the other two: the *filaments* are broad, pointed, and striated in the middle: the *antheræ* are

are oblong, erect, hairy, and shorter than the filaments: the *germen* is almost oval, and situated below the *corolla*: the *stylus* is filiform, and is of the same length with the filaments: the *stigma* is undivided: the *pericarpium* is a bilocular oval capsula, turned upside down; in each partition were two flat, oval seeds: the *smell* is like that of an *Agaric*.

Cateshæa? Javanica: the *perianthium* is short and infundibulous-form: the *tube* of the *corolla* is very long, and nearly cylindrical: the *limbus* is short and quinquefid: the four filaments are filiform, remarkably long, and inserted in the tube of the *corolla*: the *antheræ* are small: the *germen* is round and small: the *stylus* is filiform, and longer than the *stamina*: the *flowers* are blue and axillar; each peduncle bears three flowers at the utmost: the *peduncles* of each flower in particular are short: the *plant* is a *frutex*: the *branches* hang downwards, and are quadrangular: the *leaves* are ovato-lanceolated, opposite, smooth, pointed, petiolated, inclining to one side and deciduous. It grows on the sea-shore.

Convolvulus pes capræ Linn. lay on the shore, with its long tendrils and fine flowers.

Ischæmum

Ischæmum muticum procumbens Linn. was the most common grass along the sea-shore.

Vitex trifolia: the *perianthium* is monopetalous, quinquedentated, cylindrical, and very short: the *corolla* is monopetalous and ringent: the middlemost *lacinia* of the upper line is longer and broader than the four others, which are equal: the four *filaments*, two of which were longer than the others, are inserted in the base of the limbus: the *stylus* is longer than the *stamina:* the *antheræ* are bifid; and so is the *stigma*, which is reflected: the *berry* is obovated: the branches are quadrangular, lanated, like the leaves and *petioli:* two, three, or four *leaves* sit together; but on the branches they are single: the *foliola* are lanceolated and serrated. The *tree*, or *shrub*, has branches hanging down, and a *smell* of wormwood. It grows on the sea-shore.

Asclepias gigantea: the *nectarium* looks like a lion's mouth.

Memecylon capitellatum: its *styli* are filiform, as long as the *nectarium:* the *stigmata* are lamellated and joined together: the *leaves* are elliptical, and lanated below.

Verbesina

Verbesina lavenia: the leaves have two little glands at their base, and one or two about the middle.

Sida cordifolia.

Urena sinuata: the *leaves* are ovated, cordated, serrated; and the lower ones have generally an angulated edge: the *flowers* are red and at the extremities. The *plant* is a little tree.

Michelia champaca: it has no *calyx:* its *corolla* is double: it has fourteen lanceolated *petals*, of which the outward six are greater: the *filaments* are numerous, short, inserted at the base, and surrounding the *pistillum:* the *antheræ* are longer than the filaments: the *stylus*, &c. like that of the *Nymphæa:* the *flowers* are yellow, and have a very fine smell. The *Javanese* offered them to us as an agreeable present.

The *Tetradapa of the Javanese*; *Erythrina corallodendron?* the *perianthium* is monophyllous, spathaceous, short, and oval: the *vexillum* of the *corolla* is great, including four oval, short petals: the *filaments* are ten in number, nine of which are grown together half-way in one;

one; they are all subulated: the *antheræ* are erected and oblong: the *germen* is long, and lanated: the *stylus* is subulated: the *stigma* is deflected and barbated: the *flowers* are verticillated, red and deciduous. The *fruit* which lay under this tree (if it may be called so) was a narrow rhomboidal *pod* (*legumen*): it contained two kidney-shaped *seeds*. The tree was as high as a man's head, and very ramose: it had no leaves at that time, but fine scarlet flowers. It may be compared with the *Gedala litorea*; Malaice *Gelala laut* et *Gelala itam*; *Badensibus Dadab. Rumph. Tom.* iii. p. 231. *t.* 77. This author says, the tree is in blossom at the latter end of July, and the leaves fall off about that time. In the middle of August the flowers drop. In September comes the fruit and the fresh leaves. The blood-coloured parrots called *Luris* like these flowers exceedingly; about the time that the trees are in blossom, they flock about them, and suck the juice out of the *Nectaria*; and at that time they are caught in springes fixed to the boughs of the trees. The above-mentioned author shews the use of the leaves and bark in physic; on the latter of which grew *Byssus candelaris*, and on the root *Onoclea sensibilis* Linn.

Linn. vel *Filix indica polypodii facie.* Mentz. pugill. tab. penultima.

Crinum Aſiaticum Linn. *Tulipa Javana.* Rumph. t. v. page 240. t. 105.

The *ſpatha* has two leaves: the *flowers* form a knob at the top of the ſtalk, and have an agreeable ſmell: the *corolla* is monopetalous: the *tube* is cylindrical, and very long: the *limbus* is ſexfid, with long, linear, reflected *laciniæ:* the *ſtamina* and the *ſtylus* are very long, and alſo reflected: the filaments are inſerted in the mouth of the tube: the *ſtylus* is longer than the filaments, but does not reach ſo high, becauſe it ſtands much lower: the *leaves* are ſword-like and broad. It grows in the ſandy ſea-ſhore. It was brought to *Sweden* perfectly alive.

Coccus nucifera (*Palma Indica major*, Rumph. t. i. p. 1.) called *Calapa* in the *Javan* language, is a very high, but not very thick palm-tree, with a rough bark, and a ſtem which is undivided up to the crown. On the bark grows a white flour-like moſs. The cocoa-nuts, which hung at the top, looked like cabbages, and were ſomewhat triangular: the exterior ſhell of the nut is yellow when it begins to ripen,

ripen, and grows brown: it conſiſts of an outer caſe, like hemp, and is uſed as ſuch, and therefore is commonly peeled off before the nut is ſold; excepting a narrow ſtripe, which is left to ſhew how ripe the nut is; and accordingly is either green, or yellow, or brown. Yet theſe nuts may be had quite perfect if they are ordered, and in that ſtate they contain the greateſt plenty of freſh water. The fibrous ſhell is uſed for matches and ropes, but the latter ſoon rot in freſh water. The next ſhell below this is white before it is ripe, but it afterwards becomes brown and very hard: near the ſtalk it is ſomewhat angulated. The *Java* people make uſe of it to put their brown ſugar and other things in. People going to the *Eaſt Indies* make drinking veſſels and punch ladles of it: and beſides this ſome very pretty little baſkets. Oppoſite to the baſe, or to the part where the ſtalk is faſtened, are three little holes, but only one of them is eaſily opened. The innermoſt ſhell, which ſits cloſe to the hard ſhell, is white, and not much harder than a turnep before it is boiled: it may be eaten raw, and it has a taſte of ſweet almonds; and for that reaſon ſeamen mix it with cinnamon, and make a ſort of almond milk with it. It may alſo be uſed as

as a ſallad, when prepared with vinegar, ſalt, and oil. The nut is filled with a pale, ſweet water, which turns ſour if it is not drunk ſoon after the nut is opened. Every nut contains about a pint, or ſomewhat more, of this water. We uſed it for ſome weeks, whilſt it was freſh, inſtead of tea. It is ſaid that this juice, if it is uſed as water to waſh one's ſelf, gives a fine complexion. When the nut grows old, the water congeals into a ſpungy white kernel, from which, after the ſhell is opened, ſome leaves ſpring up, which keep very long without putting the nut into the ground or watering it. A hundred nuts coſt a *peſo duro*, or *Spaniſh* dollar. The trees ſtood along the ſhore in low places, and were very plentiful. Authors ſay very circumſtantially, that this tree affords cloaths, meat and drink, houſes, or huts, utenſils or houſehold implements, and other inſtruments, to the natives. To the laſt mentioned purpoſe the ſtem is of uſe; out of the branches they make the arched entrances to their huts, to which they faſten flowers on their wedding-days: the leaves are made uſe of for thatching, ſails, baſkets, brooms, and may be wrought upon with bamboo nails: the kernel and water of the nut afford them their meat and beverage: the outward ſhell

affords cloathing, painting-brushes, &c. If an incision is made into any bough, a clear juice runs from the wound in the night time, which makes syrup and vinegar if properly prepared. Without this juice of cocoa no arrack can be made: and the Chinese, for this reason, are obliged to buy this liquor here. The Indians breakfast on the kernel of the cocoa-nut, sagoe-bread and dried fish: but those of higher rank add some boiled rice. The shell is used like *Areca*, for chewing, but first they mix it with *Betel* and chalk: it is likewise put into water, and afterwards they make a milk of it, which they call *Santar*, in which they boil herbs, cabbage, rice and fishes: this milk turns sour in one night. If it is mixed with a certain quantity of water and boiled in a pot, it loses its white colour; and when all the water is gone off, a pure oil remains, which it is said is as clear and sweet as oil of olives; it is used as butter, and is a very nutritive food. Both men and women anoint themselves with cocoa oil, both against certain diseases, and because it is fashionable to have black hair. The ladies of *Java* and *Balaya* mix part of the root of turmerick (*Curcuma* Linn.) with it, which gives a lustre to their complexions. The *Portuguese* doctors prescribe

ſcribe cocoa oil with ſyrup of violets againſt coughs and aſthmas, and order gouty people to rub the parts affected with it, &c. The roots are uſed againſt dyſenteries and fevers. The ſtrangury and the *gonorrhœa virulenta* are healed by means of the flowers taken out of the ſpatha and eaten with *Lontaris* or a reddiſh ſugar. If freſh cocoa-nuts are roaſted and grow cold again, or when they are expoſed to dew, they are ſaid to put a ſtop to agues and the like diſeaſes: it might be of uſe to try this receipt in the *Eaſt India* voyages. In *Malabar* the kernels of the ripe nuts are dried by the ſun, and exported into other countries by the name of *Copra*; and oil is preſſed out of it, with which all ſorts of weapons are rubbed to prevent their ruſting.

The inhabitants of this part of *Java* had no wild birds to ſell at preſent; however, for two knives, I got an *Iſpida viridis ſupra ferruginea*: (*Merops viridis* Linn.) One might ſee by its aſpect it was not formed for a ſongſter, but only to clear the earth of grubs and other inſects. It made ſome noiſe now and then as long as it lived; but it ſurvived but a few days. After its deceaſe I took down the following particulars: the *bill* is black, ſharp,

arched, and has a narrow ridge at the top: the *eyes* are black: the *irides* are red: the *jaws* are triangular: the *tongue* is every where equally broad, narrow, and lacerated towards the tip: the *noſtrils* are round and naked: the *head* and *neck* are browniſh: the *breaſt*, *belly*, and *tail* are white, and ſomewhat greeniſh: the *wings* are green on the upper ſide; the upper margin, the extremities, and the under ſide are ferrugineous: the *back*, the *throat*, and the *tail* are blue: it has twenty-one *quill feathers*: of the twelve feathers in the tail the two middlemoſt are the largeſt: the *legs* and *feet* are aſh-coloured and naked: it has three *fore-toes* and one *back-toe*. This ſpecimen is preſerved in the *Muſeum Upſalienſe*.

SEVERAL inſects, particularly butterflies, flew about us on all ſides; but it was their good fortune that we ſtayed no longer on ſhore. I only caught an *Apis rufa*, *thorace antice linea alba*, *abdomine fuſco*; and ſome black ants. The latter were frequent in the trees.

THE *flying-boats* or *proas* of the *Java* people were pulled on ſhore and carried into the woods, leſt the great heat of the ſun ſhould ſpoil them: they are ſharp and very narrow, with an

an out-rigger of bamboo, going in the water on one-ſide, which makes it more ſecure[m].

JAVA tortoiſes (*Teſtudo Javanica*) were ſold here two for a piaſtre. They were both females. They are dreſt for eating in the ſame manner as the tortoiſes in the *Aſcenſion* Iſland, as will be found in the ſequel; but the latter are much larger, and of a quite different kind, as will appear from this deſcription: the *upper jaw* is ſtriated inwardly; the *lower* is dentated: the *upper ſhield* is of a reddiſh brown, and ſtriated: the five middlemoſt *ſcutella* are pentagonal: next to them are, on each ſide, four oblong pentagons, croſs-ways; and on the margin are twenty-five leſſer oblong quadrilateral ones: the *ſhield* on the belly is yellowiſh-white, and reticulated: on each ſide are eight ribs: the *paws* and *feet* are entire, but ſomewhat notched on the inner ſide.

AFTER we had paid a viſit to the inhabitants of *Java* for about a quarter of an hour, and bought a hundred cocoa-nuts for one *peſo duro*, the above tortoiſes, and other things, we returned on-board, where we arrived about

[m] See Lord Anſon's Voyage, book iii. chap. 5.

twelve o'clock, and found other *Java* men there, expoſing cocoa-nuts, and the following things to ſale:

Tobacco, which they chewed with *Areca*. The tobacco was cut from broad, thin, green leaves, into narrow ſtripes. It is ſaid that it is very good for ſmoaking, and might be the *Nicotiana peniculata*.

Brown powder ſugar in half cocoa-nut-ſhells, put together and tied with leaves.

Bottles of Gourds, (or of the *Cucurbita lagenaria* Linn.) filled with water, as it is made up for their own uſe, and for ſale.

Shells, particularly *Cowries*.

Cucurbita pepo.

Citrus decumana Linn. the ſhaddock, is a great, roundiſh fruit, like ſweet or *China* oranges, and eaten inſtead of ſuch; yet it is much larger than a *China* orange, and rather ſourer, and is therefore better to quench thirſt. The peel is ſpungy, of the thickneſs of a finger, bitter as a *Seville* orange, to which this fine fruit is very near akin.

There

There was another round fruit like ſmall *China* oranges, with a green warty peel, which was called *Pompelmuſs* by the *Java* people: I have ſeen but few of them. They were reckoned more valuable than the *Citrus decumana*, and had a ſweeter and more agreeable taſte. *Limon tuberoſus Martinicus*; Malaice *Lemon-Martin*, Rumph. ii. p. 101. t. 26?

Musa *paradiſiaca* Linn. *Plaintain* tree, or *Piſang*, has yellow, ſoft fruit, which looks like fingers, being ſeated on the ſtalks in ſuch a manner as to reſemble two hands. If you will keep the fruit for ſome weeks together, you muſt buy it green, and then it gradually ripens, and is pretty good to eat as ſoon as the rind is turned yellow, which eaſily peels off. It is ſaid that this is the forbidden fruit, which threw our firſt parents into miſery.

Java monkies, *Simia Aygula* Linn. *caudata ſubbarbata eminentia piloſa verticis longitudinalis*. The ſeamen call them *Tjacko*, and this is perhaps the true name which the people of *Java* give to this animal. It is no bigger than a little cat, of a light grey, or greyiſh colour, and this is likewiſe the colour of the

tuft at the top of the head: below the belly it is whitiſh: the *ſnout*, from which an elevated ſinew runs down to the lip, is narrow: the *eyes* are brown; the *pupil* is black: the *eyebrows* are large: the *beard* is ſo ſmall, that it ſcarce deſerves that name: the *nails* are narrow and long, but the nail of the thumb is ſhort. They flatter both men and thoſe of their own ſpecies, and embrace one another. If they perceive an ape of a different kind, they greet him with a thouſand grimaces. They play with dogs if they have no nearer friends about them; at firſt they are uneaſy at being ſeparated from their own ſpecies. When a number of them ſleep, they put their heads together. They make a continual noiſe during the night time; and in day time, if they are tied to one place, they continually move backwards and forwards. If any body looks croſs at them, they are angry, and begin a ſmacking. They reſemble all others of that genus in dirtyneſs, laſciviouſneſs, drollery, in ſhewing a liking to all glittering things, and an appetite for greens and fruits. They crack nuts and eat the kernel with great alacrity. It is ſaid that the monkies in *China* gather rhubarb, and pound rice. Females are but ſeldom ſold. Theſe animals in general are

not

not eaſily brought home from ſuch diſtant parts. Their conſtant nocturnal mewing is intolerable. Sometimes they are attacked by the ſcurvy, which makes them ſo ſtiff that at laſt they can ſcarce move out of one place, and this very often kills them. If you let them go about freely, they play a thouſand tricks, jump over every thing, ſteal the peoples meat away, hunt after chicken, break the necks of birds; and even carry their miſchief further, which has been atteſted by many men of veracity: ſome years ago there was a great monkey in a ſhip, and the boys being ordered to get upon the yard to take in the ſail, the monkey mounted after them, and one of them not doing his buſineſs to its liking, it bit off his ear. Theſe and other inconveniences are the reaſons why we bring no more of theſe diverting animals with us.

July the 17th.

FINE and calm weather.

A JAVANESE man, who conducted a Dutch yacht from *Batavia* to the weſtern coaſt, with a Dutch flag, came on board us, after we had fired

fired a cannon, and presented us with two large water-melons marked with Chinese characters.

About three in the afternoon we sailed from hence, with very little wind, and anchored again at five o'clock on a stony ground at twenty fathoms depth; the next night we had some lightning.

July the 18th.

The weather was fine, but wind and current were against us.

The *Java* men came to us, and had cocoa-nuts, large oranges, (*Citrus decumana*), great coffee-beans, chicken of different colours, pale-grey ducks, powder-sugar, tobacco, several mats to lie upon in the heat instead of sheets; some birds in cages, particularly little parrots of excellent green, blue, and red colours, especially the following:

Psittacus galgulus, viridis, uropygio et gulâ rubrâ, vertice cæruleo Linn. *Psittacus viridis, remigibus rectricibusque supra viridibus, subtus cæruleis, uropygio pectoreque coccineo, vertice cæruleo.* Edw. t. 6.

It

Its *size* is that of a little ſparrow; the *bill* is of the ſame ſhape with thoſe of other ſpecies of the ſame genus; the round *noſtrils* are high up on the bill, and are ſurrounded by an elevated ſkin; the *eyes* are ſurrounded by a bluiſh ſkin, with elevated points near the margin; the *head*, the *back*, the *belly*, the *upper-ſides of the wings*, and the coverts of the *tail* below, are green; but the under-ſide of each feather is purple at the bottom; the *crown* of the head is adorned with a blue ſpot; the *uropygium* and the *throat* are red; on the *neck* is a browniſh ſpot; the lower part of the back has a yellow ſpot, and towards the uropygium it grows red; the nineteen *quill-feathers* are blue on the outward edges, the reſt is green; the eleven tail-feathers are green on the upper and blue on the under ſide, and they are almoſt concealed under the coverts; the people of *Java* call theſe birds *Parkicki*, and our people call them *Paroquets:* theſe little birds are beautiful on account of their high colours, and this is the only thing that recommends them to all nations; if it is put into a cage, it whiſtles very ſeldom, and commonly grows quite ſullen; it hangs itſelf with its feet ſo, that the back is turned towards the earth, and ſeldom changes this ſituation; it is fed with boiled

boiled rice, in which manner, in the year 1752, one was brought alive to *Gothenburgh* in the ſhip the *Gothic Lion*, and I brought a ſtuffed one.

PSITTACUS *Javanicus* (*Pſittacus Alexandri* Linn.) This Parrot is twice as big as the preceding one, and is here univerſally expoſed to ſale. The *cere* is black; the *wings* have ſeven quill-feathers in the laſt joint; eleven ſecondary feathers are in the next; and in the loweſt, which is very ſhort, are a few ſmall ones; the midlemoſt of the eleven *tail-feathers* is the longeſt; the *upper-jaw* is the longeſt and pale red; the *lower* is pale yellow; the *noſtrils* ſtand very high up in the bill, and are round; the *membrane* of the head goes round about ſomewhat lower; the *head* is every where covered with very ſhort feathers of a pale blue, and pale yellow; the *temples* are black on both ſides; all the other parts of the bird are graſs coloured, except the *throat* and *breaſt* which are pale red; the *wings* are light grey below, but five of the *coverts* are yellow; the *down* cloſe to the body is grey; the *tail* is yellowiſh, the *thighs* are long and covered; the *legs* are ſhort, and like the *feet*, of a greeniſh grey; the latter have two *fore-toes* and two *back-toes*

back-toes of which the innermoſt are the ſhorteſt.

CORVUS *Javanenſis* (*Gracula religioſa* Linn.) The *Java* people call them *May-noa*; they may be compared with the *Lef-koa* of the Chineſe; it looks like a great blackbird with white membranes near the ears; the *bill*, the *legs*, and the *feet* are pale yellow; each of the outermoſt *quill-feathers* has a white ſpot; the whole bird is black beſides; each *ear* has two white membranes; the *eyes* are black; its little oblong *noſtrils* are in the middle of the bill; the *jaws* of the bill are of an equal ſize; the *irides* are moſtly covered and blue; the *legs* and *feet* are whitiſh and ſcaly; the latter have three *fore-toes* and one *back-toe*; of the ſixteen *quill-feathers* the ſeven outward ones have each a black ſpot in the middle; the ten *tail-feathers* are ſhort; the *head* is naked: this bird eats greadily, cries loud, ſmacks with its bill, and it is ſaid, it may be taught to ſpeak: we bought one here, but it died at *Canton*.

MOTACILLA *familiaris* (*Emberiza familiaris* Linn. Syſt. Nat. 311.) *capite & roſtro nigro, uropygio luteo*: the *head* is black and has a little

a little tuft; the *bill* is ſubulated, ſtreight, narrow, black; the *neck*, the *breaſt*, and the *head* are aſh-coloured; the *coverts of the tail* are yellow. It was one of the prettieſt birds I ever ſaw; for, when a perſon whiſtled to it, it ſang very ſweetly; and if any one offered his hand when the cage was opened, it would jump upon it; if it ſaw a diſh of water, it went and bathed itſelf, which it did almoſt every day; at night it was reſtleſs till we hung ſomething over its cage; we fed it with rice till it was devoured by rats at *Canton*.

JAVA Turtle doves (*Columba turtur*.) The *head* is reddiſh-grey; the *bill* is blackiſh and narrow; the *upper-jaw* is the longeſt, and ends in a ſharp point like a nail, but a little bent; the *lower-jaw* is ſtreight; the *noſtrils* are long, equally broad, oblique, raiſed up at the edges; the *irides* are red; the *throat*, the *breaſt*, and the *belly* are of a reddiſh grey; on the *neck* are white and ferrugineous ſpots; the *quill-feathers* and the *tail* are undulated with a red and ferrugineous colour; the *legs* and *feet* are red; it has three *fore-toes* and one *back-toe*.

JAVA *Sparrows. Fringilla capite & gula nigra, temporibus albis* (*Loxia oryzivora* Linn.) The *Cock-paddy*

Cock-paddy or *Rice-bird*. Edw. t. 41. The *bill* is ſometimes more, and ſometimes leſs red; the *lower-jaw* is a little longer than the upper one; the *tongue* is ſharp and lacerated; the *head* and *cheeks* are black, but grey in young birds; the *temples* are white; the *neck*, the *back*, and ſeven of the *quill-feathers* are blue, and blackiſh grey on the upper ſide; the quill-feathers are whitiſh below; the *belly* is reddiſh; the twelve feathers of the tail are black; the *vent-feathers* are white; the *legs* and *feet* are of a pale colour; the *back-toe* is as long as the middlemoſt *fore-toe*.

We now got a ſight of the *Patiallinga*: they are ſmall Dutch merchant ſhips, which cruize hereabouts, betwen the iſlands, to prevent ſmuggling on the coaſts.

Every time we heaved the lead we got pieces of corals.

Being obliged by the contrary current to anchor at *Topenſhuth*, overagainſt which is *Brabandſhuth*, the Dutch Commodore's ſhip, the *Middelburgh*, commanded by Commodore *Suavenbourg*, with four other men of war, cruizing about the coaſts of *Java*, paſſed by us. They

They brought advice, that the Queen of *Bantam* was killed, that the King was taken prisoner, and that five thousand Dragoons and one thousand five hundred Hussars were at that time ready to kill all the inhabitants of *Bantam* without distinction, who would not acknowledge the King whom they had appointed, and who should refuse to look upon the Dutch as their protectors. The prince of *Madura* supported the Dutch in this affair with all his power.

The island of *Great Java* is situated under the sixth degree of south latitude, between *Summatra*, *Banca*, *Borneo*, *Madura*, *Baly* or *Little Java*, and the country of *Eendraught* (Union). It appears from hence that it must be very hot, and the heat would be intolerable if the thick woods did not retain the moisture after the rains are over, and if all kinds of animals were not refreshed by the shade.

Batavia is the celebrated capital of the Dutch in this isle, who built it in the year 1610, in the place where the old town of *Jacatra* formerly stood; but as it lay on the other side of the isle we did not get sight of it. I am told there are fine houses in it, and that it

it is inhabited by merchants of all nations, and even by Chineſe, who contribute much to the riches of this place. The Dutch *Council of India* has its ſeat there; and from thence directs their *Eaſt-India* trade.

THE *Dutch* intend to poſſeſs themſelves of *Bantam*, a town and kingdom which has formerly been governed by a *Mahomedan* King, and carries on a great trade in pepper.

IT is ſaid that the language is either that of the natives or the *Malaic*. *Leidecker* has wrote the firſt *Malaic* and *Dutch* dictionary in *Batavia*, which Cardinal *Barberini* got publiſhed in *Latin* at *Rome*, 1631, in quarto, by *David Hixio*. *Hadrianus Relandus*, in his *Diſſertationes miſcellaneæ*, has likewiſe publiſhed a ſylloge of the dictionary of *Leidecker*. Not to mention ſome other works which the *Dutch* have publiſhed in the *Malaic* language, ſuch as the *New Teſtament*, &c. [n]

THE *Malaic* language is ſaid to be more univerſal in *India*, than *Latin* in *Europe*.

BATS? of the ſize of ravens, flew every evening from *Summatra* to *Java*, to ſpend the

[n] Mr. *Bowrey* publiſhed a Malayo and Engliſh Dictionary, in Quarto, at Lond. 1701.

night there, and returned in the morning to *Summatra*. This is undoubtedly a ſingular circumſtance, deſerving a cloſer examination. In flight and ſize they were like our ravens; a man of veracity aſſured me, that he had ſeen them in a garden at *Batavia*; do theſe animals find ſome food at *Java* which they cannot meet with in *Summatra?* or are they moleſted during the nights in *Summatra* with enemies which are not to be found in *Java?* what elſe can be the reaſon why they ſo often change their habitations?

July the 19th.

We paſſed by the point of *Bantam* in the morning, in fair weather and with favourable wind; and in the afternoon about two of the clock, two iſles which are ſo like one another that they are called the *Two Brothers*. The ground was a blue clay mixed with white ſand; it was at ten or thirteen fathoms depth.

July the 21ſt.

The water looked yellow, and was now in bloſſom°, as our people told me.

° In the northern countries of *Europe*, it is ſaid, that *the water is in bloſſom*, when it is tinged with a green or

We

We saw *Lucipara* before us. It was a very shady isle, like all the isles hereabouts which have thick forests: it is thought that this isle had its own inhabitants. Our ship required at least eighteen feet depth of water before, and nineteen and a half behind; for which reason we always sent our boat and sloop before us, as soon as we had but five fathoms depth: in some places we had scarce four fathoms depth: thus we sailed here according to the depth, and by the direction of our lead, and not according to the course, which was the cause that we did not approach *Summatra* nearer than at five fathoms depth; nor did we venture to keep further off than at seven fathoms depth.

The isle of *Summatra*, which was continually on our left, and to which we sailed so near, was low in this place, and covered with trees, which stood very close, whose stems were without branches, and all of a height; and for that reason, the forest looked like a cut

yellow hue, by a kind of *Byssus* or *Hair-weed*, with which it is then filled: and from thence even the sea is said to be in blossom, when its surface is tinged with a preternatural colour. F.

hedge, or as a clump of reeds in the water; but further on a row of higher and darker trees made their appearance. Perhaps the former trees were thoſe called *Spaniſh* reeds: the landing is ſaid to be very inconvenient, on account of the deep clay, which extends a good way into the wood: however, there are *Swedes* who have ſometimes been on ſhore for pleaſure, and to cut wood. *Juan de la Serna* ſays, in his *Diccionario Geographico*, that the above mentioned iſland is three hundred leagues long, and ſeventy broad; that it produced rice, ſeveral ſorts of ſpice and fruit; that it is ſubject to a great deal of rain; and that the heat is much greater than in *Java*: that the petty Kings have a King ſuperior to them all at *Akhen*; and that the inhabitants are black, ugly, proud, tyrannical, treacherous, and faithleſs *Mahomedans*, who deſpiſe all ſtrangers.

The iſle of *Banca* lay on our right. The mountain called *Monopin*, which is upon it, may be ſeen at a great diſtance.

We caſt anchor in the evening.

July

July the 22d.

We failed with a fair wind, however, not above half a mile from *Banca*. The isle of *Nanka*, or *Polo Nanka*, where fresh water is to be got, was observed on our right. We approached very near to the North side of *Summatra*, which looked as before mentioned; we anchored towards the third promontory or cape.

Insects came to us from the land.

The 23d July.

Having seen in the morning a *Junke* (for that is the name of a *Chinese* yacht), we happily passed a little rock hidden under water, which has frightned many *East-India* sailors, and which they call the *Fredcrick Henry*. This place is dangerous, because the low water prevents the ships from approaching the shore; but if they go too far off, the above rock may make an end of the whole voyage, as happened to a *Dutch* ship, and is still quite fresh in our memories.

I HAVE often been told that ſquirrels ſometimes ſail acroſs the ſea; but to-day I experienced, that birds likewiſe are poſſeſſed of that art; for a *Booby* (*Pelecanus Piſcator*) ſailed by us on a root.

MONOPIN upon *Banca* we left out of ſight in the afternoon, together with *Summatra*.

The 24th July.

WE now ſaw thoſe called the *Seven Iſlands* on the right; but they were at a greater diſtance than the iſles *Polo-Taya* on the left: the iſle of *Lingen*, which is one of the former and lies exactly under the line, was overagainſt us at 6 o'clock in the evening.

The 25th July, 1° Northern Latitude.

THE wind was fair, and we ſaw land.

The 26th July, 2° 39′ N. L.

WE thought that *Polo-Tingey*, where the *Swediſh Eaſt-Indiaman* the *Ritter Houſe*, was

loſt, was on our left, among the iſles; but we afterwards found, when we had paſſed by ſome of them, that it was amongſt the iſles of *Anambo*. The firſt was a little high white rock; and the others were covered with ſoil and ſome ſmall plants. We therefore turned and took another courſe. We ſaw birds of ſeveral ſorts at a diſtance; we were accompanied by ſome dog-fiſhes, and likewiſe a ſpecies of eels, with yellow tranſverſal lines, if they were not ſnakes; they kept behind the ſhip, in that part of the water which the keel of the ſhip had cut through; and I ſhould ſuppoſe that they and ſeveral other little fiſhes followed us from the Streights of *Sunda*. We likewiſe ſaw them the next day.

The 27th of July, 4° 20′ N. L.

The weather was fair, and we ſailed exactly before the wind.

Two ſwallows came in the evening, and followed the ſhip.

The 29th July, 7° 16′ N. L.

THE *Globulus* is a little white ſhell like a waiſtcoat-button. It is an univalve, very elevated at the top, flat below, and has depreſſed rays on both ſides. The worm which lived in it lay in a circle towards the ſpire, was very narrow, and was in length a finger's breadth; had two ſetaceous horns, and a filiform tail.

The 30th July, 8° 59′ N. L.

POLO *Candor*, together with ſome other iſles in the neighbourhood, appeared to the left. This iſle is inhabited, and belongs to the king of *Cambogia*: it is fifteen leagues off *Cambogia*, and its latitude 8° 40′. In the year 1746 the ſhip *Calmar* was obliged to winter near *Polo Candor*. The chaplain, *M. Tarnſtræm*, who made the firſt trial what a *Swediſh* naturaliſt might expect from ſuch voyages, died here, on the 4th of December, and his funeral was honoured by the firing of two guns. The abovementioned ſhip was forced to ſtay near this iſland from the 11th of October 1746, to the 15th of April 1747, on account of contrary

trary winds; for in the *Chineſe* ſea two continual winds blow every year; ſo that ſix months are taken up by each of them: from April to September you may ſail to *China* with a ſouth weſt wind; but the other months from *China* with a north eaſt wind. It is very unfortunate to be here when theſe winds change, for then are uſually exceeding great ſtorms (called *Tayfun* P by the *Chineſe*) which continue to rage twenty-ſix hours with ſuch fury, that the people on-board the ſhips cannot get out of their places, but muſt ſtand as if they were laſhed to the maſt: and this our

P Although Mr. *De Guignes* in his *Memoire dans lequel on prouve que les Chinois ſont une colonie Egyptienne, Paris,* 1759, 8vo. has endeavoured to prove the *Chineſe* to be the offſpring of an *Egyptian* colony: I muſt however confeſs, that his arguments were by no means ſatisfactory to me; though I very willingly allow that there is a great probability in his opinion. For a further inveſtigation of this matter by the curious, and ſuch as go to *China*, I will only remark, that the *Typhon* of the *Egyptians* was a phyſical divinity, the ſymbol of a fiery malignant eaſterly wind, for which reaſon this divinity was called *Theou phoou*, the *bad wind*, which bears a very great reſemblance to this *Chineſe* name *Tay-fun*. Beſides this, the pronoun of the firſt perſon NT in the *Egyptian* language is in the *Thebaic* or pureſt dialect, and which is pronounced *n'ye*, yet preſerved in the *Chineſe* language, both being equivalent to *I*. F.

Eaſt

Eaſt India ſailors are able to aſſert from their own experience.

The 31ſt of July, 10° 30′ N. L.

Polo *Zapata* (which is called a *laſt* by the *Swedes* from its figure) appeared, being a little, naked, white, high rock, in the open ſea.

Near this rock are a great number of birds; and by catching one of them, upon our return from *China*, we found that it was *Sterna ſtolida griſea, capite albo.* The boobies were plentiful here. I likewiſe caught a *Phalæna ſeticornis ſpirilinguis, alis planis, ſuperioribus coeruleſcentibus, maculis luteis:* the body, wings, and feet were white: the head green: the tongue ferrugineous.

The *Mill beetles* (*Blatta orientalis* Linn.[q]) annually come in ſhips from the *Eaſt Indies.* I was told that when the ſhip *Gothenburgh*, returning from *China*, foundered on a rock not far from the fortreſs *Elfsborg*, and the wet tea was carried to be dried in the ovens in the town, theſe inſects came thither

[q] The Cock Roach?

along

along with it; and have ſince continued there, and in other places. Theſe inſects, which conceal themſelves in the day time, come out in the night, when they eat ſhoes and other cloaths, which are greaſy: it is ſaid that bugs are their moſt delicious morſels; ſo if any one chuſes to exchange one peſt for another, he might perhaps authenticate this notion. We found a female of this inſect in a plantain tree (*Muſa paradiſiaca*) which came from *Java*.

The 3d of Auguſt.

The ſun was perpendicular to us to-day, and the latitude could not be obſerved for that reaſon; but as to our calculation, it was 14° 6′ N. L.

I caught a *Libellula fuſca, capite et lateribus viridibus*. The abdomen had eight articulations: the wings were all equal, and brown near the body; the outward edge had below a black right angled ſpot, but on the under ſide it was not quite black.

The

The 5th of Auguſt, 16° 48′ N. L.

This day and the preceding night we had moſtly calm and clear weather; afterwards the wind was changeable; towards evening it lightened; about twelve o'clock at night it rained very hard, with much lightning, during which the whole ſky was covered with clouds. On the foretop ſomething like a little ſtar was perceived. The Counſellor of Chancery, Mr. *Klingenſtierna*, ſays, in the learned ſpeech which he delivered in 1755, on the neweſt electrical experiments, when he reſigned the office of Preſident of the Royal Academy of Sciences, that ſuch flames are electric, being emitted from an electrical cloud, which ſerves as a conductor. Among the ancient naturaliſts theſe flames were mentioned under the names of *Helena*, *Caſtor* and *Pollux*.

The 8th of Auguſt, 22° 4′ N. L.

Piedra *Blanca*, or the *White rock*, came within our ſight, towards noon. The wind

abating, the heat became intolerable. Towards the evening we anchored.

Balistes *Monoceros* is a ſpecies of fiſh which looks like a flounder at a diſtance, and has almoſt the ſame taſte, but is not ſo fat. The fiſh was half a foot long, and its body covered with a dark-grey rough ſkin. We caught ſeveral with a hook, and this afforded me an opportunity of deſcribing them.

On each ſide is a *ſpiracle*, and next to it, within the ſkin, two tranſverſal bones: the firſt *dorſal fin* near the eyes, conſiſts of a reverſed brittle bone, which is armed with little hooks; it is the length of a finger's breadth, and a little longer than the other fins: the ſecond *dorſal fin* has forty-ſeven rays: the *pectoral fins* are the leaſt; each has thirteen rays: the *ventral fins* are wanting; in their ſtead is a long bone under the ſkin: the *anal fin* is oppoſite to the ſecond dorſal fin, and has 51 rays: the *tail* has 12 ramoſe rays: the *mouth* is oblong and narrow: the lower *jaw* is ſomewhat longer than the upper; on each ſide of it ſtand three pointed, broad *teeth*, connected together below, of which the middlemoſt is ſplit: the *lips* are moveable.

The

The 9th of Auguſt.

The ſhip hardly moved from the place where it was the day before. We ſaw beſides *Piedra Blanca* the iſle of *Lantoa*, and ſome other iſles on the *Chineſe* coaſt, on our right.

The 10th of Auguſt.

In the forenoon the ſky was clear, but the wind againſt us.

Balistes *ſcriptus*. Cateſby, vol.ii.27. A fiſh equal in ſize and appearance to the *Baliſtes monoceros*, but marked over the whole body as it were with blue letters of an Eaſtern language, was caught here, and put into *Spaniſh* brandy; but the fine colours vaniſhed as ſoon as it was dead. In the afternoon we had a tolerable good wind, but at night again ſtood out to ſea; becauſe a cloudy ſky and lightening are ſaid to be the forerunners of a ſtorm. We had cloudy weather, contrary winds, and ſhowers of rain, the following days.

The

The 13th of Auguſt.

To-day it was reſolved to look out for land, where we could, but all our endeavours were in vain.

The 14th of Auguſt.

Rain, ſtorms, and contrary winds, always drove us off from land: a ſwallow, which had been ſeen ſome days before, ſtill accompanied the ſhip.

The 15th of Auguſt.

Dark and inconſtant weather: the flying fiſh, which we ſaw on the 11th, now accompanied us.

The 16th of Auguſt.

Cloudy and rain. We ſteered W. by S. along the ſhore, though we did not ſee it: about noon we anchored and ſaw *Piedra Blanca* to the North Eaſt; not from the deck, but

but from the foretop. *Porpeſſes* tumbled in great numbers about the ſhip.

The 17th of Auguſt.

In the morning we ſaw ſome land pretty near, and anchored afterwards, but were ſoon driven from ſhore with ſtrong wind and rain. Contrary winds and calms hindered our gaining the *Chineſe* coaſts till the 22d of this month: in the mean time we got the following ſpecimens of Natural Hiſtory.

The 20th of Auguſt.

Balistes *nigro-punctatus* and a *lump* of narrow, ſmooth, round, water-coloured worms, which hung together without any order, and ſeemed to be a torn *Meduſa*, at leaſt no mark of life appeared in it.

The 21ſt of Auguſt.

The heat to-day and yeſterday, was intolerable: the large dragon flies (*Libellula*) which

which had followed our ſhip for ſome days, were well pleaſed with this weather.

A GREAT dead ſnake floated on the water, and occaſioned a poiſonous ſtench, which commonly is aſcribed to the flowering of the water.

BALISTES *Chinenſis* is diſtinguiſhed from the aforementioned ſorts, by the following character; the *bone* which makes the firſt *dorſal fin*, is ſomewhat thicker, and behind it is a ſkin: the ſecond *dorſal fin* has thirty-four rays; the *pectoral fins* thirteen rays; the *ventral fin* conſiſts of a bone with eight bent rays; on that *bone* is a membranaceous fin, which gives a greater breadth to the fiſh; the eyes are very prominent, and have a red iris; on each ſide before the eye is a ſmall hole; the *anal fin* has thirty rays; the *tail* has twelve rays: this fiſh is leſs than the others of that kind.

The 22d of Auguſt.

IN the morning we weighed anchor and ſteered to the *Chineſe* coaſt, having been obliged to linger near it fourteen days, and

having made a collection for the poor of 334 dollars in copper[r]. The pilot whom we got on board, and who brought us in, was to receive twenty *pesos duros* (four pounds seven shillings and sixpence), or 200 dollars in copper. We had *Lantoa* on our right and the Southern isles of *Limes* on the left: the sea formed high billows rolling in from the isles, which were quite green with plants, but had no woods. The most usual entry of *European* ships into *China* is by the *Ladrones*, which derive their name from the pirates who formerly lived upon them.

Macao is a *Portugueze* town on an isle, which was now on our left, but so far off that we could not see it: our *Spanish* passenger left us here, and sailed for *Macao*, from whence he designed to go to the *Isle of Manilla*, where he intended to settle.

The isle of *Linting* was on our left. We were obliged to anchor here, having no wind, and the tide against us: the fishermen sailed by

[r] A dollar in copper is about five-pence or five-pence halfpenny sterling; thus 334 dollars are about seven pounds sterling. F.

fastening

fastening their net to the mast. I here caught the *Papilio (Lintingensis) tetrapus subtus pallide luteus nebulosus, supra nigricans luteo impregnatus.* The *body* is whitish on the under, but blackish on the upper side: the *antennæ* are setaceous, blackish: the *wings* are all dentated; the primary ones of a pale yellow on the under side, with a few black spots; the *secondary wings* blackish on the upper side, and yellow below; towards the *base* they have a blue *Gemma*, or *Ocellus*, but towards the outward edge they are of a dirty yellow.

The 23d of August.

Whilst we tacked here, we met with a *Comprador*, or *Chinese* who provides the ships with the necessaries of life, such as flesh, greens, and bread. He came from *Macao*, and had *Plaintains* or the larger sort of *Pisang*, *Gujaves*, *Lanteyes*, and water-melons: his name was *Attay*, and his servants were *No-hay* and *At-yan*. The latter came every day with a large *Sampane*, and kept near the ship (or *Bareshal*). I was told that this and other *Compradors* stayed all night in the *Wam-pu* custom-house: in the factory at *Canton* there is likewise a *Comprador*,

who in the same manner gets ready every thing required for our subsistence, and who is obliged to accompany every person going on board, to the next custom-house, in order to search what he takes with him. If any body dies, the *Comprador* is to order the funeral: he that was to be the *Comprador* of our factory, was called *Lussy*.

The 24th of August.

Bocca *Tyger*, in the *Chinese* language *Phohaë*, the mouth of the *Tyger* or *Phomunn*; the *Tyger*, at its opening, is a narrow river, where we anchored about noon for want of wind. On the right hand side of the entrance, was a low castle, surrounded by trees; on both sides of it a path ascended the mountain to a small house; before which stood a white hut, which is supposed to be a place dedicated to an idol: somewhat further on the left were two castles on two different hills, surrounded likewise by trees; the most outward of them was surrounded by water, and had a little hut close to it: the inner one is higher, so that it may command the other [a].

[a] See Lord Anson's Voyage round the World, book iii. chap. 9.

MANDARIN

MANDARIN, or *Commander*, is a denomination which our people borrow from the *Portuguese*, and which they give to all public officers in this country, even to lower officers of the customs: if a *Chinese* was to pronounce this word, he would say *Mandeli*, for they cannot pronounce the letter *r*; whence it plainly appears that the word *Mandarin* does not belong to their language: some of these gentlemen now came on board, to see what sort of people we were; two *Mandarins* accompanied us up the river, to *Wam-pu*, where we met two others, each of which joined the ship in his boat with his men, each having his appointed station. He who was on the right side of the ship, and was the nearest to it, belonged to the customs, and stayed with us whilst we were in *China*; but the other on the left was a military man, and was exchanged every month: their business is, to keep off the thieving *Chinese* from the ship, and to provide those, who must, on account of business, go to *Canton* or other places, with *Tiapp*, or passports, which must be shewn at the custom-house. Their people can almost get a sufficient subsistence by washing of linen: it is remarkable, that no *Chinese* can be a *Mandarin* in the place where he is born.

The fishermen brought several sorts of fish, as eels, at least a sort of them, called *Paling* in the *Chinese* language, soals, rays, and *Chinese* crabs.

Cancer *Chinensis*. These are as big again as the *Swedish* crabs; the *body* is almost transparent, as long as a hand is broad: the *rostrum* has eight incisions above, and four below; the *eyes* are excessively prominent, as if they stood on stalks; on the sides are two little leaves; the *sides* are lacerated and notched; the *body*, besides the tail and head, has six articulations; the *tail* has four oval leaves, except the middle one, which is sharp pointed, concave, and cylindrical; the five pair of *hind feet* are red, and covered with hair towards the inward margin; the five pair of *fore feet* are *cheliferous*; instead of the two *foremost* are two pair of bifid feathered ones.

At night we advanced with wind and tide, and anchored near the *Lion's Tower*, which is the first of three remarkable towers in the way to *Canton*.

The

The 25th of Auguſt.

THE weather was clear: a rich *Chineſe* threw a tortoiſe out of his boat, for the uſe of ſuch poor people as would give themſelves the trouble to go and fetch it.

AFTER a voyage of five months and four days from *Cadiz*, we at laſt arrived at *Huam-pu*, or, as it is commonly called, *Wam-pu*. This is the place where all *European* ſhips in the river of *Canton* or *Ta-ho* ride at anchor, and where they ſtay as long as they trade in this country. We reckoned this anchoring place about four *Swediſh* miles from the mouth of the river, or *Bocca-tyger*. To *Canton* we had a mile and a half, and the town of *Wam-pu*, which is to the left when you arrive, was about half a mile off from hence. On both ſides of the river we ſaw large low rice-fields. Here were already ſixteen *European* ſhips, and one came in after us; ſo that, beſides the *Chineſe* boats, which anchor near the town, or in another place, this year there were 18 ſhips.

The *European* ſhips were the following:

Two *Swediſh* ones.

Prince Charles.

The Gothic Lion, which came a little before us, from *Suratte.*

One *Daniſh.*

The Queen of Denmark.

Two *French:*

The Duke of Chartres.

The Duke of Monteran.

Four *Dutch:*

The Commodore's ſhip, *The Conſtancy.*

Friburgh.

Amſteveen.

Geldermouſen.

Nine *Engliſh:*

The Eſſex.

Centurion.

St. George.

Cæſar.

True Briton,

Triton.

Hardwick.

Elizabeth.

Succeſs Gally, a country ſhip.

At night we heard a ſort of muſic, partly made by inſects, and partly by the noiſe of the *Gungung* in the *Sampanes* and *Bancſhals*.

Arriving at *Wam-pu*, you have a large field with rice on your right, for no other corn is uſual in this country: part of this field near the river is ſeparated from the reſt by a ditch, leading to a bancſhal, or warehouſe for *Engliſh*, *Swediſh*, and *Daniſh* ſhips; theſe ſhips annually raiſe this place higher with their ballaſt: but this time our people made a fine ſtone quay where large boats could land. The *French* have their warehouſe on the *French* iſland, which lies on the left, ſomewhat nearer to *Canton*. The *Dutch* are forbid to come here with ſeveral ſhips at once, or to land any baggage, having once attempted to bring cannon on ſhore in water-tubs; but, as they broke to pieces, their ſcheme was diſcovered. I am told that the *Dutch* have ſince got a bancſhal, in 1761.

Bangsal (in *French* bancaſal, in *Engliſh* bancſhal) is the place, or warehouſe, where we ſtow all our unneceſſary wood and tackle, pitch and tar; and keep our chicken, hogs, &c.

&c. during our ſtay in *China*. The ſhip which comes firſt has the beſt place. Each ſhip is obliged to give a ſum for the place it takes up, beſides paying the *comprador* for erecting (immediately after the arrival of a ſhip) a warehouſe in form of a barn, made of bamboo and mats, in which there are two chambers for the mate or bancſhal captain, who continually watches with ſome ſailors at both ends of the building. As long as they do not ſuſpect any thieves, they ſhout out from one bancſhal to another, *all well*, and often beat the gungung, to ſhew their vigilance. A liberty was formerly given to the centinels of firing upon the *Chineſe*, who ventured to get into thoſe bancſhals at night; but this is not now permitted.

When an eminent ſtranger pays viſits, or when the colours of a ſhip are hoiſted, the flags are diſplayed in the *bancſhal*. Towards the departure of a ſhip, the neceſſary oxen, hogs, &c. are killed in this warehouſe.

Gungung is the *Chineſe* name of an inſtrument which has the greateſt reſemblance to a braſs baſon. In all *bancſhals* and factories, a ſignal on this inſtrument is given every half hour, in the ſame manner as is done on-board by

by a bell. They give one knock at half an hour paſt twelve, two at one o'clock, and ſo on till four o'clock, when they give eight thumps, to ſignify that eight half hours are paſt: at half an hour after four, they begin again in the ſame manner; ſo that at four, eight, and twelve o'clock, eight thumps are always given on this inſtrument.

THE *Chineſe* drum on this inſtrument at their feſtivals, and ſet fire to little boats of gilt paper, and throw them into the ſea, as a part of their morning and evening amuſement on ſuch occaſions. On board the ſhips is a quarter-maſter, or cadet, who ſtands near the compaſs, and cries out, when the half-hour glaſs is run down, to him who is near the bell, how many pulls he muſt give.

THE *Daniſh Iſland* (which bears that name becauſe that nation commonly bury their dead in that place) is oppoſite to the *Bancſhal*.

THE *French* iſland is the next above the *Daniſh*: this is the burying-place of the *Engliſh*, *Swedes*, *French*, and *Dutch*. However, in both iſlands there are likewiſe ſome *Chineſe* graves.

graves. There are every where gardens, producing ſuch fruits as in our country would be cultivated in hot-houſes as rarities. But high places are never cultivated, becauſe the ſun entirely burns up whatſoever grows upon them.

The 26th of Auguſt.

It began to rain, and rained for four days together. In the morning we ſaluted, and the *Daniſh* ſhip returned the ſalute.

The *Eaſt India* company had recommended it to us, that nothing ſhould be taken from hence to *Sweden* by the crew, except a few pounds of ſugar, tea, and ſome gallons of arrack, as proviſions for the voyage. This order I read the next day after the thankſgiving for our happy arrival; and it was afterwards twice repeated before our departure.

Cyprinus *Cantonenſis* was thought to be the common carp, but it was nearer allied to the *Griſlagine:* Faun. Sue. 367. It is above a foot long: the *dorſal fin* has 10 rays, and ſtands in the middle of the back: the *pectoral fins*

fins have 21 rays: the *ventral fins* have nine rays, and are equally distant from the pectoral fins and from the anus: the *anal fin* has 11 rays: the *tail* is bifurcated, and consists of 26 rays. This fish has no *beard* (*cirrhus*): the *iris* is yellowish: the *nostrils* are at the top, in the flat part of the head, and are but little: the *membrana branchiostega* is soft and prominent: the *scales* are rhomboidal, and are flabelliform.

The 30th of August.

FINE dry weather.

THE *French*, who saluted our ship, were honoured with some guns fired at their arrival and departure.

The 1st of September.

The lead which we unloaded to-day, and the day before, was weighed by a *Chinese*, who proclaimed the weight of it aloud, and three

three other *Chineſe* wrote it down, in the preſence of ſeveral *Mandarins* [r].

The 2d of September.

SAM *pan* is a *Chineſe* boat without a keel, looking almoſt like a trough; they are made of different dimenſions, but are moſtly covered.

THERE are,

PASSENGER *Sampanes*, to carry people backward and forward between the town and the ſhips. Theſe you may hire every day; and you may either take larger ones *Tow-cytin*, or leſs ones *Suutin*. They are quicker than you would expect, provided you take advantage of the ebb or flood.

THESE boats are as long as ſloops, but broader, almoſt like a baking trough; and have at the end one or more decks of *Bamboo*

[r] Here our author has inſerted an hiſtory of *China*, extracted from books in the hands of moſt *Engliſh* readers; we have therefore omitted it, as unintereſting.

ſticks:

ſticks: the cover, or roof, is made of *Bamboo* ſticks, arched over in the ſhape of a grater; and may be raiſed or lowered at pleaſure: the ſides are made of boards, with little holes, with ſhutters inſtead of windows: the boards are faſtened on both ſides to poſts, which have notches like ſteps on the inſides, that the roof may be let down, and reſt on them: on both ends of the deck are commonly two little doors, at leaſt there is one at the hindmoſt end. A fine white ſmooth carpet ſpread up as far as the boards makes the floor, which in the middle conſiſts of looſe boards; but this carpet is only made uſe of to ſleep on. As theſe boats greatly differ from ours in ſhape, they are likewiſe rowed in a different manner: for two rowers, poſting themſelves at the back end of the ſampane, work it forwards very readily, by the motion of two oars; and can almoſt turn the veſſel juſt as they pleaſe: the oars, which are covered with a little hollow quadrangular iron, are laid on iron ſwivels, which are faſtened in the ſides of the ſampane: at the iron the oars are pieced, which makes them look a little bent: in common, a rower ſits before with a ſhort oar; but this he is forced to lay aſide when he comes near the city, on account of the great throng of ſam-

panes; and this inconvenience has confirmed the *Chineſe* in their old way of rowing. Inſtead of pitch, they make uſe of a cement like our putty, which we call *Chinam*, but the *Chineſe* call it *Kiang*. Some authors ſay that this cement is made of lime and a rezin exſuding from the tree *Tong Yea*, and *Bamboo ockam*.

THE ſampane in which I went this time had, beſides a couple of chairs, the following furniture: two oblong tables, or boards, on which ſome *Chineſe* characters were drawn; a lanthorn for the night time; and a pot to boil rice in.

THEY have alſo a little cover for their houſhold god, decorated with gilt paper and other ornaments: before him ſtood a pot, filled with aſhes, into which the tapers were put before the idol. The candles were nothing elſe than *Bamboo* chips, to the upper end of which ſaw-duſt of ſandal-wood was ſtuck on with gum. Theſe tapers are every where lighted before the idols in the pagodas, and before the doors in the ſtreets; and, in ſo large a city, occaſion a ſmoke very pernicious to the eyes. Before this idol ſtood ſome *Samſo*, or *Chineſe* brandy,

brandy, water, &c. We ought to try whether the *Chineſe* would not like to uſe juniper-wood inſtead of ſandal-wood; which latter comes from *Suratte*, and has almoſt the ſame ſmell with juniper.

FISHERMENS *ſampanes* are the leaſt of all, narrow like ſome of our fiſhing boats, and have a very little deck, of ſtraw or bamboo; or are even without that poor convenience. Bad as theſe boats are, yet parents and their naked children are ſeen to get their livelihood in them both ſummer and winter, by fiſhing, and by picking up what has been thrown over-board by others. For this purpoſe they tie ſeveral hooks to a cord, and throw them out in different places, almoſt in the ſame manner as fiſhermen in our country lay their eel hooks. They have better or worſe fortune as it happens. There is nothing ſo filthy but what theſe people will uſe as food: and the hogs which die and are thrown over-board, and, by beginning to putrify, float in a few days, are often the occaſion of ſuch quarrels as end in battles. The reaſon why the *Europeans* ſink the hogs which die on board their ſhips is, that the inhabitants of this place may not feed upon them; for it is ſaid that the *Chineſe*,

when they go on-board any ſhips, will give pepper to the hogs, which they think is poiſon to them, that they may get them again if they ſhould die. It is certain that numbers of hogs die in the poſſeſſion of the *Europeans*, whilſt they ſtay in *China*.

Duck *ſampanes* are boats in which they feed four or five hundred ducks. They have on both ſides a bridge which may be let down. In the day time the ducks feed in the river, upon herbs and fiſh; at night their maſter calls them into his boat; they immediately obey him, and come on-board as ſoon as he lets down his bridge.

Sampanes *of burden* are the largeſt boats, by means of which all porcelain, ſilk, and other commodities, are conveyed from *Canton* to the *European* ſhips. But I do not mean that theſe boats ſerve for the above mentioned purpoſe only; for they are uſed beſides as houſes for whole families; which are born, marry, and die in them. They commonly have, beſides hogs, ſome chicken, and dogs; and ſome flower pots, containing *Guinea* pepper, or ſome other plants, in theſe boats. All the above

above mentioned ſampanes are not embelliſhed by painting.

MANDARIN *ſampanes*, are greater or leſs red-painted boats, ornamented with dragons, and ſuch like figures, or with little flags.

THE *Chineſe* alſo uſe *Galleys*, *Sao-Sjo-an*, with eighteen or twenty oars, and as many men. They lie near the city of *Canton*, and ſome of them near the *European* ſhips, probably for the ſecurity of the country.

JUNKS, called *Toan-ſian* by the *Chineſe*, or, as *Du Halde* calls them, *Thouen*, in the Portugueze language *Soma* or *Sommes*, are the greater veſſels, about 200 feet long, and 20 broad. With theſe ſhips the *Chineſe* ſail along the coaſts of *Batavia*, *Manilla*, *Ainam*, *Cochinchina*, *Cambogia*, *Chinchiu*. From the laſt mentioned place comes the white ſugar candy, which at preſent coſts ſix tale, three mace peckuls. Such a veſſel holds 1000 cheſts of tea: it is high and round on each ſide: the rudder is very ſlender, and can be taken out with very little difficulty, and hung at the other end of the ſhip: it has no upper ſails; but only one great ſail, the fore-ſail, the ſprit-ſail, and the

mizzen-ſail, all which are made of mats, tied together quite acroſs with bamboo-ſticks. They ſtrike their ſails with difficulty, as they can only effect it by ſending a ſailor up the yard to tread the ſails down. In theſe veſſels there is a continual noiſe, becauſe the perſon in command does not inſiſt on ſilence; they are painted either black or white, and have always an eye painted on each ſide. Their compaſs is divided into 24 points. The timber of which theſe ſhips are built, is called *Saaomock*: the anchors are made of hard wood, which is called *Tat-ſiew*, or *Tie-mou*; but they are commonly plated with iron at the extremities, and are more handy than our anchors of iron, and of more ſervice to little veſſels.

I SHOULD have overlooked the *Dung-Sampanes*, if their ſmell had not been ſo diſagreeable as we paſſed by; ariſing from the human excrements contained in theſe veſſels.

IN *Canton*, near the port, ſome great tuns filled with it are put under ground, which after ſtaying there ſome time, are emptied into theſe veſſels and carried to the plantations, where they have walled pits into which they put this dung, mix it with water, ſtir it well, and afterwards

wards, uſe it every where in the country for manure.

THE rice fields, which are green on both ſides of the river, as far as your eye can reach, the fine woods, which conſiſt of many ſorts of trees, the hills, and the vallies, make the view beautiful, particularly on the left ſide; but the wet condition of the rice fields, and a miſtruſt of the inhabitants, did not allow me to examine things more nearly.

THERE are three cuſtom houſes, where all thoſe who go in the *Chineſe* boats between the town and the ſhips are forced to ſtay. Our people generally call them *Tiapp-Houſes*[u].

THESE *Tiapp-Houſes* are built in part on a hard ſtony ground, and partly over the river, ſupported by poſts. They have a bridge ſo contrived, that the boats may come to them at all times, as well during the ebb as the flood. And, that no one may plead ignorance, they paſte their regulations on the walls; and beſides that, cloſe to the houſe, ſtands a flag, marked with large *Chineſe* characters. The

[u] Called by the Engliſh Hoppo-Houſes.

ſloops of the Europeans paſs free with their flags, to the factory, where the cuſtom-houſe officers receive them.

If any one goes from a ſhip to *Canton*, and ſhews the *Tiapp* which the Mandarin gave him, in each of the two firſt cuſtom-houſes, an oblong red ſeal is put upon it; but in the laſt cuſtom-houſe the *Tiapp* is left. Returning from *Canton*, you obtain a Tiapp from the Interpreter, and a Comprador goes with you to the next cuſtom-houſe, where you are ſearched, and the *Tiapp* is ſealed: in the other cuſtom-houſes they obſerve the ſame method as in the going to *Canton*.

To go with the tide to *Canton*, and likewiſe down with it, is by far the moſt expeditious and agreeable way. In coming from the ſhips, the firſt cuſtom-houſe is on the right hand, not far from them, and is called—

The *Wampu Tiapp-houſe* by the *Europeans*; in the *Chineſe* language it is called *Huamp-Siogun*. Near the entry ſtood a *Pomegranate Tree*, *Hibiſcus mutabilis*, *Roſa Indica*, *&c.* *Huampu* is a little town behind the cuſtom-houſe, having

ing a tower with nine ſtories, which the *Chineſe* call *Pa-tiaw* [w].

THESE towers ſerve as ornaments to the cities, and, as the *Chineſe* affirm, as a meaſure to the roads: but the inhabitants contradict what ſome hiſtories have advanced, that theſe towers are uſed in times of war, as watch towers: on the different ſtories of theſe towers grew trees and plants, but I could not determine their kinds, being at too great a diſtance; ſomewhat further on, I ſaw the mouth of another river, through which the larger *Chineſe* boats paſs. There was a *Pagoda*, with ſeveral houſes. On the ſhore grew in ſeveral places, *Saccharum pluviatile* and *Cyperus odoratus*.

THE *Chineſe* here catch fiſh, by putting up mats along the ſhore, while the tide is in, which hinder the fry from returning with the ebb. As ſoon as the water was fallen, many people were ſeen wading up to the knees in the blue clayey ground mixed with ſand, after the little fry, which jumped about in the mud like lizards; but when they ſaw no means of ſaving themſelves, they crept a foot deep into

[w] Pagoda.

the oozy ground, not without the knowledge of the *Chineſe*, who took care to obſerve them; and pulled them out with their hands; theſe fiſh, fryed in oil, are the principal food of the poor, beſides rice; and are of two ſpecies, as will appear from the following deſcriptions.

1. *Fay-ye*, or *(Gobius pectiniroſtris* Linn.) The *membrana branchioſtega* has four very ſmall rays; the *dorſal fins* are aſh-coloured, with blue tranſverſal lines, and black ſpots at the bottom: the firſt *dorſal fin* is higher, reaches from oppoſite the breaſt, to the middle of the back, and has ſix rays; the *ſecond* has twenty-ſix very ſhort rays, and reaches from the middle of the back, to over-againſt the *anus*; the *pectoral fins* have eighteen rays; the ſingle *ventral fin* is infundibuliform, ſits cloſe to the head, and has ten rays; the *anal fin* has twenty-ſix parallel rays: all the fins but the dorſal ones are browniſh; the *head* is narrow, ſmooth, and of the ſame breadth with the middle of the body; the *mouth* is large and oblong; the *forehead* flat; the *tongue* lacerated and truncated; the *teeth* are little, pointed, ſtrait, unequal in the *upper jaw*; they ſtand only in one row, in the *middle* are few, in the *lower jaw* they fill up the whole margin; the *lips* are ſhort, and do

not

not cover the teeth: I have not discovered that they have any nostrils; the *eyes* are elevated, very prominent, oblong, and stand near one another on the head; the *pupilla* is blue; the *irides* of a golden colour; the *back* grey, with red and blue dirty spots; the *belly* whitish; the whole *body* oblong, as long as a man's hand, and as it were compressed.

2. *Tan-noao* (*Gobius niger* Linn.) The *membrana branchiostega* has four rays; the first *dorsal fin* is almost quadrangular in the middle of the back, and has eleven rays; the second is longer, and less, opposite the anus, has ten rays, is transparent on both sides, with transversal black lines; the single *ventral fin* forms a funnel, and has twelve rays; the *anal fin* has thirteen rays; the space between the second *dorsal fin* and the tail, and that between the anal fin and the tail, is equal to the breadth of one's little finger; the *tail* ends in a point, and has eighteen rays, of which the outermost are the shortest; the *body* is the same as that of the preceding fish, except its having more white and dirty black grey; the *head* is large, and has very small white dots; the *mouth* is much less, and almost round: I

saw

ſaw here a net drawn by two *Chineſe* up to their chins in water.

Duck Sampanes lay on the ſhore: hundreds of ducks came into the boat, as ſoon as the owner let down the bridge and called them.

THE *Brandy Tower* was ſomewhat further off, on the left; the *Chineſe* call it *Tie-koang*; When the ſailors come over-againſt it, and can ſee light quite acroſs the windows of the tower, from their ſloop, they are entitled to a draught of brandy. This cuſtom gives name to the tower, which is half way between *Wampu* and *Canton*.

THE *Lazarus tree* is further up on the right; it was ſaid, that people having the leproſy, and other naſty diſeaſes, lived under this tree, which has very luxuriant branches. Some little inns, which ſtand ſeveral of them cloſe together, ſomewhat higher up on poſts, above the river, make the beginning of the ſuburbs: before them lie innumerable ſmall and great ſampanes quite crowded, as well as junks or large *Chineſe* veſſels; which occaſion the paſſage to be very narrow and difficult, by the boats

boats meeting each other in ſo contracted a ſpace.

We now ſtopped at the ſecond cuſtom-houſe, called *Toang-pack-toy* in the *Chineſe* language; having juſt before paſſed a caſtle in the middle of the river, which was on our left; another caſtle is ſomewhat higher up; both were ſurrounded by trees: I was told, that the *Dutch* had built one of theſe forts.

The third cuſtom-houſe is the principal: it is near the factories, and the *Chineſe* call it *Tay-quam-Song-gunn*; it is the laſt you meet with before you get to *Canton*: the cuſtom-houſe papers (*Tiaps*) are taken in and kept here. If you were to go from *Canton* to *Bocca-tyger*, you need not ſtop at any other cuſtom-houſe, except theſe three, though there are many others between theſe places; for next to *Huam-po* is the fourth, called *Oty*; the fifth is called *O-tyoang*; the ſixth, *Baxia-tunn*; the ſeventh *Toann-tao*; and the eighth, *Pho-munn*, or the cuſtom-houſe of *Bocca-tyger*, or the mouth of the *Tyger*.

The tower of *Canton* was the third that we ſaw on this route,

The

The Factory is the first place in the suburbs to which the *Europeans* come: this is a general denomination of the houses built towards the river, or over it upon piles, and which are let by the *Chinese* merchants to the *European* ships during their stay: this time is sometimes five months, and sometimes a year; which long delay, though it may arise from accidental causes, is often by design, lest several ships coming home at once should glut the market with *Chinese* goods: during this time the *Europeans* lend money to a great advantage in *China*; but a person who has not borrowed considerable sums himself runs great risque, when he lends his money in a place where the debtor is often sought for in vain. Commonly each ship takes a factory for itself; but sometimes two ships of a nation, may be together, and this time it happened so to two *Swedish* ships, and if I remember right, they paid 900 tel for it, which, at the rate of seven dollars per tel, make 6300 dollars in silver.

The' above-mentioned houses are but two stories high, but very long; and one end of them stretches towards the river, and the other to the factory-street: some are built of unburnt bricks, others of bricks and wood laid cross-

croſs-ways; but the partitions and upper floors, &c. are ſometimes entirely of wood: therefore they are ſo poorly provided againſt fire, that on the ſeventh of *December* 1743, in three or four hours, more than 150 houſes were reduced to aſhes: the fire, for want of proper regulation, would have ſpread farther, if it had not been for Commodore *Anſon* and his men: the inhabitants, who believe an inevitable deſtiny, were merely ſpectators, not attempting to extinguiſh it. The factories look like two houſes built parallel and near to each other, between which there is a court-yard; the floor of the lower ſtory is covered, like the court yard, with ſquare or rather oblong ſtones; in theſe ſtones are here and there little holes, through which the water may run into the river; the ſtair-caſes are either of ſtone or wood; the rooms are high, and the roofs are ſloping and covered with tiles, like thoſe in *Spain*.

WINDOWS are made in the roofs, but they are ſquare, and leſs than thoſe in the walls: there are no ceilings up ſtairs below the roof: a room has ſeldom windows on more than one ſide; theſe are long, and narrow, with wooden bows, and have ſquare panes of mother of pearl,

pearl, but the poorer ſort make uſe of other ſhells; which are the breadth of a hand each way. Lead and glaſs are never to be met with in a *Chineſe* window: theſe windows ſtand open in day time, becauſe they do not give ſufficient light; at night they are ſhut, to keep out gnats, bats, &c. In the lower ſtory are few windows, and thoſe look into the inner court.

NEAR ſome of the rooms is a little garden, of the ſize of a middling room. The doors, when opened, give ſufficient light to theſe apartments; for the ſide towards the garden is quite free. The garden encroaches no farther on the court yard than the projection of the building. From the exceſſive heats, the doors are moſtly kept open; but a *nanking* curtain is commonly hung up before them, with three pieces of wood plated with braſs; one of which is at the top, one in the middle, and one at the bottom.

OUR hangings conſiſted of white *Chineſe* paper, paſted to the wall. Though this paper is very ſmooth, yet lizards (*lacerta Chinenſis*) run with ſuch agility up and down the walls, that they can ſcarce be caught. In ſummer time

time they abound in the houſes, but in winter they diſappear: they do no harm, but merely ſeek for their food, which is mill-beetles and other inſects.

THE *Chineſe* padlocks are made in ſuch a manner that many of them may be opened with one key; and therefore it is a proper precaution to bring ſome from *Europe*.

THE company finds in every room a table, chairs, and a bed, with curtains of gauze, or blue *nanking*-ſtuff.

YOU are obliged to draw your curtains quite cloſe, to keep out *Muſquitoes*, a ſpecies of gnats, which is very troubleſome at night; and whoſe ſting is ſometimes the cauſe of incurable complaints.

HENCE the influence of different climates appears: for in our country the bite of a flea, and the ſting of a gnat, are reckoned equal; but it is quite otherwiſe in *China*, though theſe gnats are the ſame with ours.

IN each room is likewiſe a lamp, faſtened to the roof by a long rope. The *Chineſe* do the

ſame in their houſes, though they have both white wax candles and others, which they call *Lapp-tiock*. Theſe latter looked as if they were made of tallow; but, as I ſuppoſe, were made of the fruit of the tallow-tree. The outward layer of theſe candles, which is red and ſtiff, is called *Nan-cy* in the *Chineſe* language.

Some kept, on the outſide before the windows, in a glaſs bowl, gold and ſilver fiſhes, called *Kamni-ko* by the *Chineſe*.

Their colours ſhift like thoſe of the fineſt birds. For their food, a ſpecies of plants was put into the water, the leaves of which reſemble *Ceratophyllum demerſum & Piſtia ſtratiotes*, which is here called *Siu-yan-gai*.

Others had, beſides theſe fiſhes, ſeveral little trees in flower-pots, before the windows, ſuch as are likewiſe cultivated in their nurſeries and gardens; *videlicet*, a ſort of low ſweet orange trees, with a ſmall fruit which is called *Gatt* here; moreover the *Lemt-yes* tree, which bears little round four lemons called *Namang* in *China*, and which are uſed inſtead of tamarinds, or common lemons, in punch, and generally

generally before they are ripe. Beſides theſe are the following plants:

Capſicum fruteſcens.

Thuya orientalis.

Lanfa, or *Leenſa Chinenſium.*

Moquaifa Chinenſ.

Nyctanthes orientalis, wood of roſes.

Celoſia cryſtata, in the *Chineſe* language *Lat-ſeo.*

Narciſſus Tazetta, or *Chineſe lilies*, which flower in January, and are called *Soiſinn-fatt* by the *Chineſe.*

THEIR culture requires little art; they only put ſo much coarſe ſand upon a tin plate as juſt covers it, and upon this they ſet the bulbs quite naked. Theſe were ſooner in flower when the bulbs were prevented ſtriking downwards.

Gomphrena globoſa.

Impatiens balſamina.

Ipomœa Quamoclit, in *China* called *Kam-fan-fang*, which adorned the hedges without the city.

THE tea-chests and porcelane-chests, and other effects which are to be taken home, are piled up on both sides of the yard. This yard is divided quite across by three arched walls: in some places of the yard buildings like coach-houses run quite across it, which are sometimes supported by arched roofs.

A FACTORY is mostly built in the following manner: near the entrance of the street of the factory, on both sides of the gate, is a little apartment, upon which are commonly some papers with figures like arms, and two round lanthorns of bamboo, covered with skins; for glass or horn lanthorns are quite unusual here. The gate of the factory is on the inside built over: directly behind it stands a high board almost as broad as the entrance, to hinder the people in the streets from looking into the yard or court, without being any obstacle to those who pass to and fro. In almost all corners are buckets into which people make water, which is afterwards carried upon the fields.

The

The foremoſt rooms on the ſides look like kitchens, and have rails before them. Further on, quite acroſs the court, in the ſecond ſtory, is an open hall, with a ſort of gallery, upon which is an altar covered with flowers and incenſe, provided with a gilt picture and a table. Behind this the yard is quite open in front, but on the ſides are rooms both above and below. In the ſide roofs are here and there ſome lanthorns of painted gauze, in ſome of which they burn lamps at night. Before the ſide roofs, and on their ſides, are little gardens, with bamboo trees, citrons, and plaintains, and other trees already mentioned. The wall about theſe trees towards the yard is made of brick, which, except the foundation, are laid like lattice work. Next to theſe gardens is an incloſed court-yard, and then an open one, with rooms and gardens for pleaſure on the ſides: the laſt of all is a hall in the ſecond ſtory acroſs the yard, having rooms on its ſides, and another hall goes towards the water, which we fitted up for a dining-room. Below it is the kitchen, the watch-houſe of the ſailors, and the lodging of the captain of the factory. The captain of the factory has a mate, who is to take care that the ſailors and *Chineſe* workmen do their buſineſs: and he notes

down thoſe people who come from or go to the ſhips with ſampanes of burden. In the factories live the ſupercargo, the aſſiſtants, the purſers, the cooks, and other ſervants, during the whole time of their ſtay; and beſides them, thoſe who come occaſionally thither from the ſhips.

THERE are continually ſome ſailors, who watch with drawn ſwords in their hands, to hinder thoſe from entering who have no right. They indicate the time upon the *Gungung*; and beat upon it as it were upon a drum with ſticks, when dinner or ſupper is ready. Every thing is carefully kept in the factories, both effects coming from the ſhips, *videlicet*, money, lead, cloth, raiſins, almonds, &c. and thoſe which are to be embarked, as porcelane, tea, ſilk, and many other things, which are brought on board by the ſampanes of burden, after ſome mandarins, appointed for that purpoſe, have weighed them, and ſtamped a ſeal upon them. In each ſampane, loaded with theſe and other things, goes a mandarin and ſome armed ſailors from the factory to the ſhip to guard them, leſt the maſter of the ſampane ſhould defraud them, as often happens notwithſtanding theſe regulations. The ſupercargo

cargo always ſends a letter to the captain, or whoever has the command of the ſhip, with an account of all the boxes and packs, and the ſailors bring an anſwer back. The flag of the factory ſtands on the water-ſide, and is hoiſted on all feſtivals.

Our ſhips are obliged to have a *Fiador*; For that purpoſe one of the richeſt and moſt reſpectable merchants is generally choſen, who is anſwerable for all damages to the company; and in caſe an *European* ſhould wrong a *Chineſe*, muſt make up matters in the beſt manner poſſible, &c. Our *Fiador's* name was *Suqua*.

The name we give to the *Chineſe* ſervants is *Kulier*. Theſe wait at table in the factories, bring in the meat, waſh the diſhes, &c. clean the knives and forks, fill the lamps in the yard and rooms with oil at night, clean the veſſels, and do the like buſineſs; which the *Chineſe* valets de chambre look upon as trifling, in regard to ſweeping the rooms, aſſiſting in carrying the tea-cheſts, and other wares in and out, &c.

These, and a *Chineſe* cook, are paid by the company. Beſides theſe, every one, or ſeve-

ral together, hire a *Chineſe* ſervant, who is paid ſome dollars *per* month. This perſon buys every thing you want, and frequently by this means avails himſelf more than by his wages. Happy is the man who has not the misfortune of hiring a thief into his houſe; but often however it is the caſe.

THE city of *Canton* is the trading place of *China*, whence all the *European* ſhips fetch their *Chineſe* wares, ſince the trade upon *A-moy* has ceaſed: the merchants came hither from thence. *Canton* lies in a province of the ſame name, under 23 deg. 8 min. north latitude, and 95° 30′ longitude, or 6 hours 22 min. eaſt from *Upſal*; but 3 deg. 31 min. weſt from the meridian of *Peking*. One ſide of it lies on the banks of the river, from which one or more canals croſs the ſuburbs. The houſes are built on both ſides cloſe to the ſtone bridges which go over the canal; which, for this reaſon, is not immediately perceived. Both the old and the new city have the name of *Canton*: the latter is not fortified: the old town, which has been built many centuries, has high walls and ſeveral gates: each gate has a centinel, in order that no *European* may get in, except under particular circumſtances, with the leave

leave of people of note; in this case you are carried into the city in a covered chair, and thus you do not get a sight of any thing worth notice in the place. The centinels have whips instead of muskets. Three fourths of this fortified town (which, as we are told, is inhabited on one side by the *Tartars*, on the other by *Chinese*) is surrounded by the suburbs. On the outside of that part of the city which is open to the country, is a fine walk between the wall and the ditch. The plantations begin close to the ditches; they are mostly on low grounds, contain all sorts of greens, roots and rice, and reach as far as you can see. The dry hills serve for burying places, and pastures for cattle.

The city wall consists of hewn sand-stones, is covered with all sorts of little trees and plants, *videlicet*, *Ficus Indica*, *Urtica nivea*, &c. and on the top of them are centry boxes; however, the watch is so ill observed, that strangers passing by are often welcomed with such a volley of stones that their lives are endangered; as happened to an *Englishman* during my stay. It is said that on the walls are some eight or nine pounders; at least it is certain, that at eight o'clock at night their report is

heard. I had no opportunity of measuring the circuit of the city, but it seemed to me to be above a *Swedish* mile *.

I KNOW nothing of the inside of this city, except what report says of it; namely, that besides the merchants and ladies, it is inhabited by people of the highest rank.

TSANG-TO, or *Tsan-tack*, is the principal person in this town, who has the whole command not only of the militia, but also of the province and the cities round about; and is compared to a viceroy by the *Europeans*. The inferior lords fall upon their knees before him: his retinue is magnificent, as we had an opportunity of observing when he honoured us with a visit.

FU YENN is the next in rank to *Tsang-to* in this town.

HAPPA is the principal officer of the custom-house.

THE high court of judicature at *Canton* has 17 other towns under its jurisdiction, one of

* That is, about six miles three quarters *English*. F.

which

which is of the ſecond, and the reſt of the third rank.

THE ſuburbs of *Canton* (in which the *Europeans* live during the time they trade here) are much greater than the fortified city.

THE ſtreets are long, ſeldom ſtrait, about a fathom wide more or leſs, paved like the court yards, with oblong ſand-ſtones, (*Cos Chinenſis*) without any gutters. The ſtones are full of holes, that the water may run off; for the town, at leaſt a part of it, is built on piles. Nothing is more common than to ſee *Chineſe* hogs, dogs, and chicken, about the ſtreets, and in the houſes: yet every thing is cleanly here, becauſe poor people continually go about with baſkets and gather up all the filth. I never ſaw any other animals, ſuch as are uſual with us, not even horſes, though they are to be met with in the country: where alſo I ſaw buffaloes, which were kept off from the plantations (which have ſeldom any fence round them) by people appointed for that purpoſe. No carriage is to be met with in the city; and whatever is brought from one place to another, ſuch as hogs, ducks, frogs, ſnails, roots, greens, &c. is all carried on men's

men's ſhoulders in two baſkets, hanging on the extremities of a pole.

Living fiſh were carried about in buckets; The *Chineſe* keep them in the following manner in their houſes:

The fiſh are put into large water veſſels in the ſtreets, but each veſſel ſtands under a ſpout which comes out of the wall; out of which the water runs continually, but ſlowly, upon the fiſh: and for this reaſon they were always to be got quite as freſh as if they had juſt been caught.

Fish cut to pieces were carried about for ſale on little tables, which hung on poles as above deſcribed: the ſame was done with bacon, and *Fdaufu*, a diſh which is like our ſweet cheeſe, but which was prepared of *Chineſe* beans (*Dolichos Chinenſis*).

Persons that carry any thing muſt continually be calling to the people that throng the principal ſtreet, *to clear the way*.

Palankin, or *Chineſe* chairs, carried by two half naked *Chineſe*, on the ſhoulders with-

out

out ſtraps, were to be hired out of the city, at the rate of half a piaſtre.

MOST of the houſes are built of bricks, and are in general as high as the aforementioned factories, but ſometimes lower. They contain merchants ſhops, working-places, and the ladies houſes, which are far removed from the ſtreets.

THE ladies are continually confined; and in ſhops or working-places are only men, and perhaps ſometimes a blind beggar woman.

SOME merchants have ſeveral ſhops in one houſe, and quite cloſe to one another, in a line; but beſides them ſcarce any other apartments. They leave their houſes at night, and go home to their ladies. In the outward ſhop they commonly have coarſe porcellanc, ſuch as the *Chineſe* themſelves buy, a quantity of toys, and the like. This ſhop is quite open towards the ſtreet, ſo that the people that paſs by may ſee every thing in it. In the middle of it is an opening to another vault, filled alſo with porcellane on both ſides, but of a finer kind, and for the *Europeans*, who are here not ſo much peſtered with impudent *Chi-*

neſe,

vese. Behind this is another for silks, velvets, and such like commodities. In some shops the next vaults have tea or other commodities of this kind. On great festivals these long, narrow houses are opened, illuminated and ornamented with artificial flowers and trees, which look as if they were the work of nature itself. The last vault is for the musicians.

In the porcellane street, which is the broadest in the whole town, are several of these houses, with many arches or vaults one after another, in which is nothing but porcellane.

The less merchants are satisfied with about two shops, one behind another; in the first of which, as just mentioned, is coarse porcellane, and in the other all sorts of other wares, as silk, stuffs, handkerchiefs, ribbands, cotton-stuffs, *Indian* ink, painted paper, tea, snuff-boxes of mother of pearl, tortoise shells (*cypræa*), fans, tea-boxes made of tutanego, or of copper, with a porcellane enamel, *English* knives, &c.

In the inward vault is a stair case to a gallery which goes above the outermost vault, and gets its light from windows towards the street.

ſtreet. They uſe it as a dining-room, or ſometimes to work in, &c. In a place like this, the famous *Face-maker* was at work, who makes mens figures, moſtly in miniature. *Europeans* often go to this man to be repreſented in their uſual dreſs; and ſometimes he hits them exceedingly well. The upper rooms above-mentioned, the floor, the partition, the lattice-work, as alſo doors, ſtair-caſes, and rails towards the ſtreets, are commonly all of wood. On the outſide, before the ſhops and working-places, hang boards, on which the name of the merchant or tradeſman is written, in large *Chineſe* characters: on the ſides are other boards, on which the wares are marked.

INSTEAD of ovens and chimnies, ſtoves are made uſe of here, which draw very well. The pots in which they boil rice and other meats look clumſy, as if they were made of caſt iron; their ſhape was pretty much like the cup of an acorn.

PEOPLE of the ſame trade commonly live in the ſame ſtreet together. The factory ſtreet has merchants ſhops, joiners, japanners, and workers in mother of pearl.

THE

THE porcellane ſtreet is known for its fine vaults, containing porcellane. In the other ſtreets are a number of druggiſts, and apothecaries, flower-makers, dyers, umbrella-makers, book-binders, mirrour-makers, ſmiths, taylors, ſhoe-makers, diſtillers of ſamſu, ſtone-maſons, and ſome goldſmiths. In the apothecaries ſhops (of which there are a great many) hung ſome ſtags horns on the cieling and walls, as alſo a number of dried plants, unknown in our country.

I NEVER could obſerve that they mixed ſeveral things together, or that they ſold any electuaries, eſſences, and the like; but only ſome roots, partly entire, partly cut in pieces. The people bought theſe medicines without preſcriptions, and cured themſelves as well as they could.

YAN-SAM, or *Yan-ſom*, is the *Chineſe* name of a root, which is to be got in our apothecaries ſhops by the name of *Ninſi* (*Panax quinque folia*, Linn.); every ounce of it coſts at preſent 30 or 40 ounces of ſilver: the root is whitiſh, ſomewhat like parſnips, but ſcarce ſo large; it often divides into two ſtalks, in which the *Chineſe*

Chineſe find the reſemblance of a man, for which reaſon they have given it the aforementioned name. It is ſomewhat knobby, or as it were in rings; and ſo it is in the inſide. It is hard; and the heavier the better.

YAN-SAM, or, as we commonly ſay, *Ginſeng*, is not allowed to be imported into *China*, becauſe it grows wild in that country. *Duhalde*, in his Deſcription of *China*, Vol. II. ſays, that it grows in *Tartary* from 39 to 49 degrees latitude; that it was to be met with in fields ſurrounded with woods, as alſo in woods on the banks of rivers, on the roots of trees, and near mountains, but was never to be found in vallies, moraſſes, and open fields; and that the *Tartars* call it *Orhota*, that is, *Captain of the Plants*. When Father *Jartona* undertook to make a map of *Tartary*, he deſcribed this plant; which is likewiſe, though ſeldom, found in *Setchuen*. In *America* it is called *Garentouges*, or human thighs. Notwithſtanding the order againſt importing it, the *Europeans* buy that in *Spain* which comes from *America*, and import it privately; but I fear that they get ſcarce half what it coſts in *China*. The *Chineſe* are of opinion that the *Weſt Indian* roots of *Ginſeng* are not ſo good as theirs; for

that reaſon they hang it over a boiling pot, ſo that it may ſweat, and dry it afterwards. I never looked into their apothecaries ſhops, but they were always ſelling *Ginſeng*. Both poor people and thoſe of the higheſt rank make uſe of it. According to their opinion, it is an excellent remedy for a conſumption, and other diſeaſes, if they boil half an ounce in their tea or ſoup, every morning. In 1709 the Emperor gave orders to 10,000 *Tartars* to go in queſt of theſe roots, and to bring as much as they could find; of which every one was to give two pounds of the beſt to the Emperor, and to ſell the reſt for the ſame weight of fine ſilver. In this manner the Emperor got 20,000 *Katye*, or *Chineſe* pounds of *Yan-ſam*, in that one year.

I was greatly deſirous of getting ſome knowledge of the *Chineſe* officinal herbs, and the diſeaſes againſt which they are made uſe of. On this account I applied to thoſe who were able to inſtruct me in this branch of knowledge; and offered moderate rewards: but it was abſolutely impoſſible; for firſt I could form no idea of their inward diſeaſes, as the people themſelves are not able to give a clear deſcription of them; and the mere

names of diſeaſes are as incomprehenſible to us, as ours to them. When they grow ſick, they go into the ladies apartments, which no ſtranger is allowed to enter. Secondly, their officinal plants themſelves were unknown; and that the more, as none of them are to be met with in the apothecaries ſhops with the parts of fructification: and I could not, even for money, get one to ſhew me the place where they grew. It is probable they get them at a conſiderable diſtance; ſince, notwithſtanding my walks about the town, I never found a ſingle one in the places I was allowed to go to, ſuch as gardens, environs of villages, hills, ditches, and rice fields. Thirdly, As ſoon as a *Chineſe* obſerves you want to be acquainted with theſe particulars, he is either ſilent, or gives you a falſe account; as I have often obſerved from the different relations of ſeveral perſons; which at laſt made me very loth to make any more enquiries. I finally conſidered, that the *Chineſe* officinal plants would not thrive in our climate; that if any were of uſe in ſome diſeaſes, we ſhould be forced to get them from *China*, and ſo increaſe the revenues of its inhabitants unneceſſarily, when we are already provided with a ſufficient number of medicines. We have many plants

in our country, which have not yet been tried in medicine.

The goldſmiths work pretty well, and commonly cheaper than in our country; but they do not think it inconſiſtent with their characters to cheat. In ſilver ſnuff-boxes, plates of lead have been found; not to mention other frauds. Their touch-ſtones nearly reſemble an egg in ſhape, and were like our pebbles. Snuff-boxes are made of ſeveral ſorts of ſtones, commonly called fluors, of mother of pearl, falſe agate from *Sumatra*, and of tortoiſe ſhells; ſome have *Japan* copper on the inſide, in-laid with figures of ſilver. The *Europeans* get buttons, heads of canes, &c. made, in which manner part of the ſilver comes again to *Europe* after the *Chineſe* have wrought it. Gold is not ſo much eſteemed as with us, and is not ſo fine. Great quantities of gold are brought from *China* into *France* and other countries.

The joiners here make uſe of a leſs number of tools than ours do, but they are not ſo ſkilful as ours. For want of a bench, they ſit down on the ground, put the board againſt the belly, and hold it only with the feet. Their hatchets, or *tu-pao*, are ſmall, and ſomewhat excavated

excavated on the inner ſides, but like our hatchets on the outward ſide, and in the reſt of their ſhape. They do not make uſe of hammers, but content themſelves with theſe hatchets. Their pincers are not at all like ours, for they conſiſt of an iron a foot long, ſcarce as thick as a finger, and an inch broad; however one end of it is ſomewhat broader and thinner, in which are two or three holes; on the other end it has a quadrangular foot, which is an inch ſquare, and ſharp on the corners; on it a looſe quadrangular ring is hung, juſt fitting to the foot, ſo that the extraction of a nail is eaſily effected. [See tab. xii. f. 3.] Their whet-ſtones are of a fine ſand-ſtone, and were much admired by our carpenters. Their ſaws are like ours, but leſs; the whole frame is wooden. The handle of their piercers, and the piercers themſelves, are like thoſe which we employ to pierce iron, and other hard bodies. They work in many ſorts of wood, both hard and ſoft, which are no further known to us, than that the bureaux, draught, and cheſs-boards, &c. which we bring to *Europe*, are made of them. The black ebony, which is *ghome*, is not plentiful here, becauſe it is brought hither from other places in the *Eaſt Indies*, particularly the *French Iſle of Maurice*.

Rose *wood* is heavy, red, has a fine ſmell, has black and light veins, and is very dear. A certain ſpecies of light-brown wood is much eſteemed here, and the *Europeans* have cheſts made of it. All tea-boxes are made of a ſoft ſort of wood, which cracks in the fire like firr; and, as it is uſed to contain tea, the *Chineſe* call it *Tia-mock*, or the *Tea-tree*. The light-brown wood, of which *Europeans* get cheſts made for their cloaths, is ſold pretty dear. I bought a cheſt of five feet long, two feet broad, varniſhed over, and plated with braſs, to lay my cloaths in, for 100 dollars of copper. *Cheſs-boards* of roſe-wood, inlaid with ivory and black ebony, were to be ſold here.

Shaupann is the *Chineſe* name of that ſort of wood of which they make coffins, which are almoſt every where of an equal breadth, and therefore are more like our bee-hives [y] than our coffins: the ſides and the lids of them are of planks of the thickneſs of ſome

[y] In *Sweden*, and in the northern countries, a bee-hive conſiſts of a piece of fir-wood of about five or ſix feet length, excavated on one ſide like a canoe; and then a board is clapped before this long hollow, with a ſmall hole in it, for the bees to go in and out. F.

inches:

Carpesium abrotanoides.

inches: the bottom and the ſides are likewiſe of planks. On the ends, which ſtand out a little, the boards are cut obliquely, and very ſharp on the outward edge. The coffins are made ſo cloſe, that no ſmell can come through.

THE Japanners have ready-made bureaux, tea-boards, boxes, &c. beſides the work that is beſpoken. Theſe men, as well as thoſe who work in mother of pearl, and the painters of porcelane, have little boys who are very diligent and active. That kind of varniſhed work which comes from *Japan* is reckoned the moſt valuable.

KILONG, or the blackiſh-brown thick varniſh, which is ſpread with a broad ſtiff bruſh upon boxes, and other ſuch like things, is very hurtful to the eyes. *Duhalde* ſays, that this varniſh is made of roſin which exſudes out of trees growing in *Setchuen* and *Kiangſi*; the deareſt varniſh is ſaid to come from the neighbourhood of *Kantcheou*, which is one of the moſt ſouthern cities of *Kiang-ſi*. The roſin is gathered as ſoon as the trees are ſeven years old. They gather it in the ſummer nights; and to that purpoſe they make inciſions in the tree, of which the loweſt is ſeven inches from

the ground, and the reſt at the diſtance of ſeven inches from each other, along the whole ſtem. Under the inciſions they put oyſter ſhells, out of which they take the varniſh the next morning. See *Du Halde's* Deſcript. p. 303. Any thing covered with this varniſh muſt by all means be dried under cover, and not in the open air.

THE dyers make uſe of brazil or *fernambuco* to dye purple, which is moſt in faſhion here. Their other dying materials I never ſaw; though I have often been in their dying manufactories. I am of opinion that we can learn very little from the *Chineſe* dyers, ſince there is ſcarce any compariſon between the colours of their ſtuffs and thoſe of ours.

THOSE people who work in mother of pearl, have a quantity of counters, boxes, tea-ſpoons, &c. to ſell.

HERE are barbers in plenty. Their razors are ſmall, and ſomewhat bent; they are well ſkilled in their work. The hair is preſerved, and employed to manure the ground.

RUBBING

RUBBING is uſual among the *Chineſe*, to put the blood in motion, inſtead of bleeding. The people who do this buſineſs rub and beat the body all over with their clenched fiſts, and work the arms and other limbs ſo that their crackling may be heard at a conſiderable diſtance. Some young fellows follow this trade; they carry a chain with ſeveral inſtruments on their ſhoulders; among theſe inſtruments are tongs, with which they make a noiſe like that of a Jew's trumpet, and give notice of their being at hand. They cut the nails with an iron which has the look of a narrow plane; as alſo the hair within the noſtrils, and on the eye-brows, for ſuch a trifle, that even the loweſt rank of people are enabled to make uſe of them.

PORCELLANE comes hither from other places; ſome is painted, and ſome not. That which is painted here according to particular directions, or with names, or coats of arms, is very dear. The porcellane from *Nanking* is reckoned the beſt, next to that from *Japan:* though a certain author ſays, that the beſt porcelane comes from the village of *Sinkteſimo*. See *L'Ambaſſade des Prov. unies*, p. 118. The

ſtone porcellane is the heavieſt, and its price the greateſt. *Duhalde* ſays, that this porcellane is only made in the province of *Kiang ſi*, in the city of *King-te-ching*, which is ſaid to be a league in length, and to contain a million of inhabitants. Porcellane is a compoſition of two kinds of clay, one of which is called *Petun-tſe*, and the other *Kaolin*; the latter contains ſhining particles, and keeps the whole together. They have lately found out a ſort of ſtone, or lime, which they call *Ho-a-khe*, and uſe inſtead of *Ka-o-lin*. [Their phyſicians give ſix parts of this ſtone with one part of powder of liquorice wood, to cool the blood]. The porcellane is glazed with *Chekao*, a ſpecies of ſtone like allum, or with *Ho-a-khe*. The *Chekao* is firſt burnt in an oven; to make the blue colour, they take *Lapis lazuli*; and to the purple they add a kind of ſtones which they call *Tſin*. *Duhalde* ſeems to mean by it *Cobalt*, with which our porcellane is painted. See *Duhalde's* Deſcription of *China*, Tom. ii. p. 310, 312, 314, 324.

Umbrellos are made in great quantities, of black waxed paper and bamboo-wood, and ſold at two dollars in copper apiece.

Books

Books are only ſtitched in white, and ſometimes in gold paper. The leaves are thin and always double. The ſize is large octavo. No books of any other language than the *Chineſe* are to be met with in the country: and in the ſuburbs of *Canton* are ſcarcely any others than almanacks: the paper is made of the inner bark of bamboo tree. See *Le Comte's Deſcript. of China*, p. 186. May not the bark of the juniper ſhrub, and of other trees, be of the ſame uſe? The mirrour-makers have ſome little pitiful looking-glaſſes. I was told of a glaſs-houſe in *Canton*, but never had an opportunity of going to ſee it. It is ſaid, the importation of glaſs from *Europe* is forbidden. However, the *Europeans* often bring glaſs with them, and get roſes or other flowers painted on them, as the *Chineſe* are pretty ſkilful that way.

The ſhoe-makers have learned to make *European* ſhoes and ſlippers, and ſell four pair for a piece of eight, or ten dollars in copper: but they are indeed not worth more; for they are ſewed with cotton thread, and therefore, as ſoon as they are uſed in the wet, the ſeams part, and the ſoles and heels get looſe. They

are

are made of hogs leather, and often rough on both ſides; the hair is burnt off with a red-hot iron.

Taylors offer their ſervice as ſoon as any *Europeans* arrive, as almoſt every one wants waiſtcoats of ſatin, paduaſoy, or taffety; for which the black colour is commonly choſen. All *Europeans* go here, as well as aboard, only in their waiſtcoats, with a white cotton cap, and a hat over it, carrying a ſtick in their hands. Coats are only made uſe of when one *European* viſits another. The taylors commonly find the ſtuffs, and are paid for all together afterwards: a waiſtcoat and a pair of breeches of ſatin came to five tel, or ſeventy dollars in copper. The *Chineſe* taylors ſciſſars are ſmall, but exactly like ours in every other reſpect. Their needles have round eyes, 100 of them coſt a mes. Pins are not made here. Inſtead of the ſmoothing iron, they have a little pan, without feet of braſs or copper, into which they put ſome burning charcoal, and rub the ſeams, or all that muſt be ſmoothed with it. Their ſilk buttons and button-holes are ſtrong and well made. Theſe taylors are often contented with worſe ſilver than the *Spaniſh*. The ell which the taylors make uſe of is ſometimes longer,

longer, and that uſed in ſhops ſhorter, than it ought to be.

THE hatters twiſt all their hats, both for men and women, of bamboo. The *Chineſe* never make uſe of other hats. They at firſt make their hats like a round mat, and beat them afterwards to the right ſize. Hats for women are higher than mens hats.

THE diſtillers of *ſamſu*, or the people who make the *Chineſe* brandy called *ſamſu*, live likewiſe in the ſuburbs. This drink ſmells like the worſt ſort of common brandy, and does not taſte much better. It is made of rice, and is by no means, as ſome imagine, the ſame as arrack, which the *Chineſe* and we buy of the *Dutch*; becauſe the cocoa-nuts of which arrack is made do not grow here, but only near the Line, in *Java* and other places.

THE *Chineſe* make the *ſamſu* warm, and drink a tea-cup full at their meals. They do not uſe ſtrong liquors to exceſs, unleſs ſome of them learn to drink from the *Europeans*. During my ſtay in *China*, I never ſaw a drunken *Chineſe* among ſuch a number of people. The heathens, who have no law naturally, do what the

the law requires; but the chriſtians are not aſhamed to diſhonour God by ſome vice or other amidſt the heathens.

THE houſes of the ſtone-maſons take up a whole lane, and perhaps more. They hew tomb-ſtones and mill-ſtones, the former of red and the latter of grey ſand-ſtone. The millers live in great numbers in a ſeparate part of the town, and make the rice-groats. They firſt grind off the huſks by a wooden mill; they then ſtamp the grains in a ſtone mortar with a peſtle, which is faſtened with an iron pin to a wooden lever; one arm of which is weighed down, and then the peſtle by its own weight falls upon the rice in the ſtone mortar: this motion is continued till the work is finiſhed.

WATCH-MAKERS are very much wanted here. The *Chineſe* buy large and little watches of the *Engliſh*. In their ſhops they have ſometimes *Engliſh* watches to ſell, and ſometimes at moderate prices, but moſtly of the worſt kind.

PERRIWIGS, gloves, bread, and coffee, are things which the *Chineſe* can do without; and for

for this reaſon we find no places where they are made. They do not cut their tobacco, but ſmoak the leaves ſuch as they naturally are. Taking ſnuff and chewing of tobacco are not yet in faſhion among them.

The ſilk manufactures are as far off as the apartments of the ladies, whoſe buſineſs it is to ſpin and to weave. Their looms are level with the floor, and ſo ſituated that they may ſit on them and put their feet into that part on which the loom ſtands. I once came into ſuch a place towards the ſtreet, where a mat of bamboo was hung up inſtead of a door. This occaſioned an outcry from the perſon who ſtood at the door; the dog received me as an enemy, and the female weavers left their work in a great hurry. The *Europeans* order their ſilks as ſoon as they arrive, and they get them ready a little before they ſet off again. Old ſtuffs are ſeldom bought, becauſe they are good for nothing when they return from ſuch a long ſea voyage. The ſilks are rolled or calendered between two ſmooth ſtones, whoſe thickneſs is the breadth of the ſilks: the lower of theſe ſtones is faſt in the floor, and is like the concave ſide of half a cylinder; the upper one fits into the lower, in the form of a half-

half-moon. The ſtuff is rolled upon a cylinder of yellow braſs, and put between the two ſtones; then a fellow gets upon the upper ſtone, ſo that he has one foot on each ſide; and holding himſelf by a fixed piece of wood, thus with his treading he calenders better than four perſons in our country are able to do it upon our inconvenient and dear wooden rolls. [See tab. xii. f. 4.]

COTTON is plucked aſunder and made clean with an inſtrument which would be worth procuring: and though I ordered one, the *Chineſe* was not ſo good as his word; and the ſame happened to me in many other things.

IN the markets, where the people every day run about like ants, they ſell fruit, garden herbs, fiſh, bacon, &c.

A PAGODA, or idol-temple, is near one of theſe markets. In this they offer incenſe to their idols, which the *Europeans* call *yos*, from the *Portugueſe dios*, and which are repreſented by one or more gilt pictures of ſeveral ſizes, according as their ſaint looked when he was alive. The honours they beſtow upon him are in conſequence of his writings, or of any

other ſervices he has done to the public. Theſe pictures, together with ſome foliage on the ſides, are in the place of an altar table. Both upon the altar, and upon particular tables, are flower-pots, incenſe, and all ſorts of meat and drink, ſuch as fruit and the like; in particular large oranges [z], a ſpecies of fruit like ſweet oranges, but much larger, and having a ſpungy peel of the thickneſs of one's finger. This fruit has an agreeable taſte, is ſomewhat ſourer than a ſweet orange, and ſweeter than lemons. They offer the ſame ſacrifices in private houſes; for every body has his own idol. A bell without a clapper hangs on one ſide, and a drum on the other ſide, before the altar. In other places at the entrance there are many areas and terraſſes, but on both ſides ſtand very tall figures of men. The pagodas have never any ſteeple. The roofs are ornamented with large dragons, lying length-ways along the walls. Rich people build pagodas ſometimes, that their relations may be every day employed in burning incenſe, ſacrificing, and other ceremonies, in commemoration of their ſaint. The prieſts are called *Vau-ſiong* by the *Chineſe*,

[z] Theſe are ſhaddocks.

and

and *Bonzes* by the *Europeans* [a]. They go with their heads bare and ſhaved, dreſs in ſteel-coloured ſilk coats with wide ſleeves, which look like ſurplices, and wear roſaries about their necks. When they officiated on the feſtival of the lanthorns, they had red coats and high caps. Perhaps this was an order different from the former. Hundreds of bonzes ſometimes perform their functions in one temple. The houſes of theſe prieſts ſurround the pagodas, inſtead of a church-yard wall. They live upon the revenues from the legacies of their patrons, which afford likewiſe ſubſiſtance to the ſteward. Rice, which is their principal food, is boiled in a pot, which is fixed near the pagoda. They eat all together in a hall.

TRADE is carried on here by the inhabitants and by the *Armenians*, and other *Aſiatic* nations, beſides the *Europeans*.

A QUANTITY of foreign commodities, and of their own country, is annually exported from *Canton*, eſpecially porcellane, commonly called *China* ware, which is uſed many ways. They bring it hither from the inner parts of

[a] The prieſts in *Japan* are likewiſe called bonzes.

the

the country, some painted, and some not. The *painted china* from *Nanking* is much esteemed. The *Japan china* is reckoned best. The *stone porcellane* is heavier, harder, and dearer than the common china. *Du Halde* says, that the finest comes from the little town of *Kin-te-ching*.

RAW *silk*, such as is clean and dry, does not rub off its colour; if well packed up in chests, is the best.

SILK *stuffs*, are of all sorts, of one colour, as well as of many, such as damasks, satins, paduasoy, taffeties, pelings, velvets, &c.

COTTONS, white, a piece commonly contains ninety-two *koabi*, or thirty-seven and a half *Swedish* ells, and are not in width above half such an ell. A piece costs two pesos duros, or about twenty dollars of copper, though some cost more, when the bottomry is reckoned in: a piece of their common linen, which is much finer, closer, stronger, and not bleached, contains 113 *koabi*, or seventy-one three quarters *Swedish* ells, and costs four piastres and an half. Quilts, cotton-tick at four or

or five meſs; ſtockings, handkerchiefs, &c. are plentiful here.

But all theſe cottons are to be got at *Madras*, and other *Indian* trading towns, much ſtronger, and with more laſting colours.

Fine *chintz*, *Madras* linen, *Madras* handkerchiefs, &c. are likewiſe to be had at *Canton*; the *Engliſh* ſhips bring them to that place; but they are very dear, ſince they are ſecond or third hand goods.

Linen, made of other raw materials, ſuch as *Hannoes*, *Kantyoa*, *Chincao*, is to be got here at four kandarin, four kaſs, an ell.

Umbrellas are here made in great quantities, of horſe bones, ivory, mother of pearl, tortoiſe ſhells, and bamboo.

The painting of this country, repreſenting men and their employments, trees, plants, flowers, fruit, birds, and the like, by their lively colours compenſate for the want of art [b].

[b] Some years ago the *Chineſe* were very defective in their drawings: but of late, ſince they have had opportu-

Flowers

OSBECKIA chinensis
kom hocång-Loaa or Goldrose feather.

FLOWERS of paper, and silk stuffs. Of the innumerable quantity of painted flowers which are to be had here, none are like nature; and either the leaves or the petals are misrepresented. As for the animals, they seemed to me like horses with birds feet, and men with claws.

JAPANNED goods are bureaux, shrines, band-boxes, powder-boxes, and other boxes, tea-boards, tables, snuff-boxes, &c.

GOLD is exported in great quantity to *France*, and other *European* places.

COPPER in bars. *Japan* copper is much employed to in-lay boxes of mother of pearl, and of other kinds. Tortoise shell boxes are plated on the inside with such copper, gilt.

TINTENAQUE, or tutanego. See *Wallerius's* Mineralogy, p. 464. spec. 32. is to be got in long pieces, each of five or six pekuls, at the rate of three or four tel. It comes in

nities of seeing the performances of *European* artists, they are much improved, and particularly in perspective, with which they were before perfectly unacquainted.

great quantities from *Queda* and *Jahor*, on the *Malacca* coaſt, with the *Engliſh* country ſhips [c]. It is univerſally believed, that this metal when mixed with lead, is uſed to plate the tea-cheſts.

TIN comes in ſmall pieces from *Pegu* and *Jahor*.

LEAD is uſed for tea-canniſters, and to line tea-cheſts.

ALUM. The katty of the fine and clear ſort is ſold at two kandarin.

LAPIS *lazuli* comes from the north of *China*, and from *Tibet*.

BORAX, we uſed to buy annually of the *Dutch*, after it had been refined, as a thing abſolutely neceſſary for our goldſmiths. But probably we have already begun to refine it at home; which will enable us to be ſatisfied with crude *borax* for the future; which we can get from *Suratte* in our ſhips, with conſiderable gain [d].

[c] Country ſhips are *European* ſhips, going from *India* only to *China*, and to other *Aſiatic* places.

[d] The *Venetians* were the firſt that refined *Borax*, or *Tincal* as it is called before it is refined: ſince whom the

QUICK-

QUICK-SILVER is tried by ſqueezing it through ſhamoy, or any thin leather: and if the quick-ſilver is good it will leave nothing at all behind. Another way of trying it is, to evaporate ſome in a ſpoon over the fire: if it leaves a ſpot behind, it is looked upon as impure and adulterated.

CINNABAR is looked upon as not pure when it is in cakes, or ground. The beſt muſt be clean, of a ſhivery compact texture, of a ſhining crimſon colour, very heavy, and in large lumps, of two or three inches thickneſs. It generally bears the ſame price as quick-ſilver.

INDIAN *ink*. The beſt comes from *Nanking*.

MUSK comes from *Tonkin* in bladders. The true muſk burns with a flame when ſet on fire, which it does not when it is adulterated with goat's blood. *Du Halde* relates, that a *Chineſe* who has muſk about him may ſleep in the fields without any fear of ſnakes.

Dutch, and of late the *Engliſh* have obtained the method, which is ſtill a ſecret in few hands.

SUGAR is to be got at a reaſonable price here. Powder-ſugar is prepared in the *French iſland*. Sugar-candy comes from *Cochin*, *China*, and other places. The whiteſt and cleareſt ſugar-candy comes from *Chinkew* in loaves: a pekul of it was ſold at ſix tel, and three meſs. Loaf-ſugar is not made in *China*.

TEA [e]. The *Europeans* learned to drink this infuſion in the fifteenth century, and ſince that time have vied with each other in giving the *Chineſe* the moſt money for this and other goods which are become faſhionable: it grows both in *China* and in *Japan*, of which ſee *Kæmpfer's* Amoenitates Exot. p. 505. et ſeqq. where both the gathering and drying of the leaves are deſcribed. It likewiſe grows in *Tonkin*; but the beſt tea, according to *Du Halde*, comes from *Fokien*. We have as many names for tea as there are places where it grows; and different ways of preparing it; [f] though all the *Chineſe* tea is ſaid to be of one

[e] Tea in the *Chineſe* language is called *Tia*, in *Fokien* it is called *Te*, and as the *Europeans* landed firſt in that province, that dialect has been preſerved.

[f] It has been univerſally believed that all teas came from the ſame ſhrub, and are only diſtinguiſhed by the different

Tea 1 茶 Tja

Honang-Tea. 2 何 hå 南 nam

Ankai-Tea 3 安 an 西 kaj

Taö-kyen-Tea. 4 韶 taó 春 kjånn

Congo-Tea 5 美 kong 茶 so

Soatchuen-Tea 6 雀 sca 舌 gång

Linkisoüm-Tea 7 連 linkis 心 üm

Pekho-Tea 8 白 pack 湖 kå

Bohea-Tea k 武 mo 夷 ji

9 霧 hey 春 kiån 9. Heyson Tea

10 沃 tiö 茶 thé 10. Tie-Tea

11 成 'sing 茶 tja 11. Singlo Tea

12 大 tdaj 先 sjö 12. Yams

13 萬 lao

a 一 jatt 丫 daam a. a Pecket

b 一 jatt 千 kann b. a Catty

c 三 sann 千 kann c. three Catty

d 四 sö 千 kann d. four Catty

e 五 en 千 kaan e. five Catty

f 六 lück 千 kann f. six Catty

g 七 satt 千 kann g. seven Catty

h 八 patt 千 kann h. eight Catty

i 九 kau 千 kann i. nine Catty

k 十 siapp 千 kann k. ten Catty

l 一 jatt 両 leå l. one Tale

m 一 jatt 錢 sien m. one Mace

n 一 jatt 分 fann n. one Kandarin

o 二 nji 分 fann o. two Kandarin

p 一 jatt 厘 lai p. one Cash

茶 ta S. sa f. teh Kæmpf. amoen 817.

ſhrub. Tea is generally diſtinguiſhed into brown and green, according as it tinges the water.

BROWN tea is *Honam Té*, or *Kuli-Té*, which grows in ſome places about *Canton*, and is drunk by the *Chineſe*, but not by the *Europeans*: its taſte being the leaſt agreeable of any. [See tab. xiii. fig. 2.] The dried leaves are either yellow or browniſh. The tea ſhrubs, which are ſold in flower-pots here, ſcarce grow to the height of an ell. The flower conſiſts of ſix white petals, of which the three loweſt are the ſmalleſt.

AN-KAY is a coarſe ſort of tea, from a place of this name. [Tab. xiii. f. 3.]

age, gathering, and preparation. But Doctor *Hill* has lately diſcovered that the brown tea comes from the tea ſhrub with ſix petals, or flower leaves, which *Kæmpfer* has deſcribed, and repreſented: but that the green tea is taken from the tea ſhrub with nine leaved flowers. The former in *Linnæus's* Spec. Plantarum, Ed. ii. p. 734. is *Thea bohea*, and the latter *Thea viridis*. *Linnæus* diſtinguiſhes it, beſides the flowers, by the longer and narrower leaves. Dr. *Schreber*. It is notwithſtanding, very doubtful whether the plant of the green tea is really different from that of the bohea tea. F.

TE-BOHE, which we usually call *Bohea-tea*, is called *Moji* by the *Chinese*. This sort is brought to *Sweden* in greater quantities than any of the others. The best sort smells agreeably, and in a short time gives a brown colour to the water, and consists of leaves of one colour; if any black ones are among them, it is a bad sort. [Tab. xiii. f. 3.]

TAO-KYONN is the name of the best sort of bohea tea. [Tab. xiii. f. 4.]

KONGO, or as the *Chinese* call it *Kong-fo*, has an agreeable scent: its leaves are finer than those of *Té-bohé*; though it is scarce distinguishable from the best *Bohea*, except in price; for *Congo* is somewhat dearer. [Tab. xiii. f. 5.]

SUTCHONG, or *Sootchuen*, which the *Chinese* call *Saatyang*, or *Su-tyann*, is the dearest of all brown teas, and is most usual among our people of quality; as green tea is among the *English*. This tea gives a fine yellow green colour to the water, and has an agreeable taste; unless you put too much into the pot, which

which ſpoils both taſte and colour. [Tab. xiii. f. 6.]

PADRE *ſutchong* is the beſt tea that can be drunk: for even the beſt *Ruſſia* tea, which comes by land by carravans to *Ruſſia*, is not better in taſte or ſcent. The leaves of this tea are large, yellowiſh, not rolled up, but expanded; and packed up in papers of half a pound each, like tobacco. If it is not taken great care of at ſea, it is much altered for the worſe.

LIN-KISAM is a ſort of tea which hath narrow rough leaves, and foot-ſtalks. It is ſeldom uſed by itſelf, but mixed with other ſorts. The *Chineſe* can turn *Congo* into *Pecko*, if to the firſt they add ſome *Lin-kiſam*. This may be compared with with what *Kæmpfer* mentions about the word *Zaſanqua* [g]. [Tab. xiii. f. 7.]

[g] *Amæn.* p. 853. "*Zoſanqua* is a leſs ſort of *Tſubacki*, "has a ſimple flower, with five petals, many filaments, "and a pear-like fruit, with three grains, of the ſize of a "*Piſtachio Kernel*; the grains are white and globoſe; the "leaves are prepared and mixed with tea, to give it a fine "ſmell."

BACH-HO

BACK-HO, or *Pack-ho*, is that which we call *Pecko*, which has leaves with dots. It is a mild tea, has a good taſte, and is ſaid to be the leaſt heating of any. [Tab. xiii. f. 8.]

Of Green Teas, there are

HYSON, called *Hy-tiann*, or *Hi-kiong* by the *Chineſe*. [Tab. xiii. f. 9.]

SINGLO, or *Sanglo*, is ſo called from the place whence it comes. The *Chineſe* likewiſe call it *Sing-tia*. [Tab. xiii. f. 11.]

BING, or imperial tea.

TIO is rolled up like peaſe[h]. [Tab. xiii. f. 10.]

HYSON-UTCHIN, is diſtinguiſhable from the *Hyſon ſkin* by its narrow and ſhort leaves.

GO-BE' hath long narrow leaves.

THE *Chineſe* likewiſe make *tea cakes*, which they ſell very dear.

[h] This ſort is rolled up between the hands in a rounder ſhape than the others. A ſmaller kind is called *Gunpowder tea*.

It is almoſt incredible what quantities of tea are annually exported into *Europe* and other parts; and what innumerable hands are employed in ſo unneceſſary an article. The countryman muſt with great care plant and nurſe the tea ſhrubs; pluck every leaf in due time; ſeparate the new leaves from the old, and dry them with extreme accuracy. The green tea is ſaid to differ from the others only by conſiſting of young leaves, or by means of repeated dryings. But ſince ſome ſort of brown tea likewiſe conſiſts of tender young leaves, the afore-mentioned reaſon is not probable. I imagine the difference ariſes from the plates on which (according to their own accounts) the tea is dried. It is not unlikely that green tea is dried on copper plates, and the brown on iron plates: which is the more likely, ſince green tea occaſions purging, which ſeems to be the effect of verdigreaſe: but brown tea hath the contrary effect. At laſt when the merchant has got the baſkets of tea, at a low rate, from the country people, he muſt often take care of it for years together; and is always uncertain when or at what price he ſhall ſell it. When the *Europeans* have fixed upon a place where they will make their bargains, they empty the baſkets

baſkets (but let it be noted I am now ſpeaking of *Bohea tea*, for the finer ſorts are ſold in cheſts); and if any bad tea is found in theſe baſkets, it is ſeparated from the reſt. The good tea is then packed up in new cheſts, the weight of which is deducted; and theſe cheſts are marked, and lined with lead in the inſide. A *Chineſe* gets into theſe cheſts, and treads down the tea as it is emptied out of the baſkets: this is very hard labour; and throws the treader, who is almoſt naked, into a profuſe perſpiration [i]. Though great care is taken to prevent any thing from coming into the tea, yet it is hardly to be avoided: and ſometimes their feet are wounded and bleed. But the tea has already paſſed through ſo many dirty hands, that thoſe who uſe that drug have no reaſon to be diſguſted with this laſt mark of indelicacy in the package [k]. As ſoon as ſome

[i] This diſguſting circumſtance remarkably attends the bagging or treading of hops into their bags. Nor are the circumſtances regarding the treading the wine-preſs, or of ſugar or raiſins into hogſheads or barrels, very delicate; yet ſuch kind of package is unavoidable.

[k] The veins on the feet of ſome *Chineſe* are very ſtrong, and run in extraordinary directions. The bamboo ſticks, upon which they carry tea cheſts and other heavy things, make deep impreſſions on their ſhoulders.

of

of the chefts are packed by a number of *Kuleers*, or *Chinese* fervants, they are paſted over with paper, and carried out of the warehouſe to the factories, where they are weighed by the *Chineſe* cuſtom-houſe officers, in the preſence of the interpreter, and marked red with a ſtiff bruſh, or with a wooden ſtamp. Some poor people are ſatisfied with the leaves of *Rhamnus Thea*, which they put into their clayey water inſtead of tea, to make it more palatable. In the account of the *Dutch* embaſſy to *China*, it is related that the *Chineſe* make uſe of a ſpecies of moſs inſtead of tea.

Soya, or the *Tyong-yao* of the *Chineſe*, (*Dolichos Soja* Linn.) the *Japan Soya*, is better and dearer than the *Chineſe*. For its preparation ſee *Kæmph.* Amœn. p. 839. and likewiſe *Soja Dolichos*, *Flor. Zeylan.* 354. It was ſold the katty at three kanderins.

Camphire is ſold here unrefined at a good price. If it is to go far, it muſt be well packed up in a tintenaque. When camphire is packed near tea, it ſpoils its ſmell and taſte. A *Chineſe* told me, that the camphire tree was to be found near *Canton*, (*Laurus Camphora* Linn.) and that it was called *Tyong-ſio*; he alſo began

to tell me in what manner the camphire or *Tyong-noao* of the *Chineſe* was extracted from the wood by boiling; but as ſoon as he underſtood that this tree was unknown in my country, I waited in vain for further information. I deſired him to ſhew me a branch of it; but he anſwered that the leaves were already fallen off, and that it was not to be diſtinguiſhed: but what he endeavoured to hide from me may be read in *Kæmpher's* Amœn. p. 770.

Rice (*Oryza Sativa*) is the daily bread of the *Chineſe*, and grows in ſuch plenty here, that both *Europeans* and other nations provide themſelves and their countrymen with it at a very low rate. If there is a famine in the country, the people run by thouſands to *Canton*, where they can get their livelihood better, and may live upon rice groats for two ſtivers (1*d.*) a day. For on the ſea ſhore no other grain is in uſe.

Rhubarb, in the *Chineſe* language *Tayhoang*, is ſold the katty at two meſs, and ſometimes leſs. If we are to believe the *Chineſe*, no rhubarb grows about *Canton*. But I ſaw in one part of the town quite freſh roots drying in the ſun; which therefore could not come

come a great way off. *Du Halde* tells us, that the beſt rhubarb grows in *Setchuen*. The marks of its goodneſs are, that it is dry, old, and as it were marked with oriental characters. The *Chineſe* doctors never uſe rhubarb by itſelf [l], but preſcribe it always freſh, and mixed with other medicines. They cut the root into ſlices and put it into a cullender over a boiling kettle, that it may imbibe the ſteam of the boiling water. Theſe ſlices are then expoſed to the ſun for ſix hours together: this is nine times repeated. The *Portugueſe* at *Macao* boil it in water, and drink it as a ſtomachic [m].

CHINA *root*, (*Smilax China*) by the *Chineſe* *Long-fan-tao*, ought to be heavy, and not pierced by worms: it is very cheap here. In our ſhip we only threw it in between the cheſts of tea, and thus brought them to our apothecaries ſhops. It grew near the river, on dry hills, where the wind can blow freely.

[l] The Jeſuit *Martini* died of half an ounce of rhubarb. See *Bayer's* Muſ. the Preface, p. 23.

[m] *Bayer's* Muſ. the Preface, p. 24.

GALGANT,

GALGANT, *Galangal*, or *Radix Galangæ* (*Maranta Galanga*) is likewise an agreeable root. It ought to be red, and not eaten by worms. It is used, like *China-root*, to fill up the empty spaces in the ships, between the tea chests.

INDIGO is sold here: but the best comes from *Biana* near *Agra* in the *East Indies*.

MOTHER *of pearl* is plentiful here.

THE *Chinese* sell their goods even in *Java*, *India*, *Japan*, in the *Philippines*, and other *Asiatic* isles. They export not only their own goods, but also those which they have got from the *Europeans*, to supply their wants and those of others.

GOODS from *Europe* are silver, lead, thin cloaths, scarlet cloth, blue, black, dark, and violet woollen stuffs; flints, pistols, guns, blades of swords, watches, wines, raisins, bottles, and other glass, *ginseng* [n], &c.

[n] *Ginseng* is a *Chinese* plant, but it grows likewise in *North America*, on plains in shady places, and was fre-

THE

THE *Chineſe* get many commodities from ſeveral parts of *Aſia*; and in particular,

Parrots,

Ivory,

Tortoiſe ſhells,

Aſa-fœtida.

PINANG, or *Areca Catechu* Linn. is a fruit which looks like a nutmeg in the inſide. Our Eaſt Indiamen begin to bring *areck* from *Suratte* to *Canton*. A quarter of one of theſe nuts is wrapt up in a betel-leaf, and covered with lime of oyſter-ſhells. In *India* it is looked upon as a mark of ill-breeding not to eat *Pinang* before you ſpeak to a man of quality; and you will think yourſelf neglected if he does not likewiſe treat you with the ſame.

THE *Chineſe* keep the ſhells of the *areck-nuts*, and make a decoction of them againſt dyſenteries, &c. It is likewiſe reported that

quently gathered for the *Chineſe* trade in the neighbourhood of *Quebec*. See *Kalm's* Journey through *North America*, 1749, the 7th Aug. Mr. *Oſbeck* mentions it under the *Chineſe* merchandizes. F.

they communicate to each other by means of *Pinang* lascivious medicines, their antidotes, and the leaves of *Oheat goena*, together with other poisons. *Old Pinang-nuts*, made round and polished, put during one night into water in which some snake-tree wood has been soaked before, are sometimes given for *Piedra del Puerco* [o], as *Rumph.* says.

Birds nests [p] are a scarce and dear dish: they look like little dishes, or like half the rind of a lemon; the best are white and clear, almost like isinglass. They grow tough like a

[o] *Piedra del puerco* is a concretion found in the *cystis fellea*, or gall-bladder of the *Malacca Porcupine*, which, when soaked in water for some hours, impregnates it with a considerable bitterness; although the *Piedra del puerco* loses scarcely a grain of its weight. This infusion is used in *India* as a cordial in malignant putrid fevers, and in the jaundice. The high price of these *Piedras del puerco*, which sometimes amounts to fifty pounds sterling apiece, has caused that they are frequently counterfeited and adulterated. See *Kæmpfer's* Amœn. Exot. p. 395. F.

[p] *Nidus avis* is the name they bear in our apothecaries shops. *Yenowa Yenika*, vulgo *Yens*. Nidus halcyonum, vulgo nidus avium, pro obsoniis ad coquinas expetitus. Nidos hos rupibus oceani orientalis affixos parant hirundines marinæ, domesticis multo majores ex holothuriis mari innatantibus materiam decerpentes. *Kempf.* Am. p. 833.

piece

piece of leather: they are got at *Borneo*, *Java*, the *Molucca Iſles*, *Cambogia*, and *Cochin-China*. Theſe birds are ſaid to build their neſts of little fiſhes on the rocks in the ſea, and to belong to the ſwallow kind. A ſlimy juice is ſaid to iſſue out of their bills, by means of which they faſten their neſts to the rock: it is alſo related of them, that they make uſe of the ſlime ſwimming in the ſea, to make all the parts of their neſts much in the ſame manner as ſwallows do with clay. Their neſts are taken after the young ones are flown [q].

Sanguis *Draconis*. The goodneſs of its colour is tried upon white paper.

Sagu,[r] or *Sago*, from the *Molucca Iſlands*, *Java*, *Sumatra*, *Jahora*, and *Borneo*. *White Sago* is more ſcarce, and muſt be of a different ſort.

Costus *dulcis* (*Coſtus Arabicus* Linn. Mat. Med.) or *Putchuch*, is a root uſual in our apothecaries ſhops. It ought to be clear, and ſmell like violets.

[q] *Du Halde's* Deſcript. of *China*, 8vo tom. ii. p. 201.

[r] This is the *Malaic* Name; in *Java* it is called *Bulum*, and is made of the pith of the *Cycas circinnalis* Linn.

SPICES; videlicet, *Pepper* (*Piper nigrum*); *Long Pepper*, (*Piper longum*); *Cubebes* (*Cubeba* Linn. Mat. Med. 526) *Cloves* (*Caryophylus aromaticus*), *Cardamum* (*Amomum cardamomum*), come from *Cochin-China*, *Cambogia*, and *Siam*.

STICKLACK from *Pegu*: The gum which quite covers the ſticks is clear and high coloured. The lack from *Vizapatnam* is not ſo good.

GUMM *Benjamin*, or *Benzoin*, comes from *Sindi*, and the *Spice Iſlands*, in large cheſts of 50 or 60 pounds weight, packed up in mats. The beſt looks like white marble. There is likewiſe a coarſe kind, which is black and ſoft: it is packed in cheſts.

CAMBOGIA, *Gamboge*, or *Gum-gutta*, of a high yellow gold colour, from *Cochin-China*, *Cambogia*, &c. in bundles.

SANTAL (*Santalum album*) is ſweet-ſcented, and comes from *Suratte*, where our *Swediſh* ſhip the *Gothic Lion* (the firſt that ever came to that place from *Sweden*) bought, in 1750, ſome of this wood for ſeven tell, and ſold a great deal of it at *Canton*: the pekul at 13 tell.

tell. The *Chineſe* make uſe of this wood inſtead of incenſe. They take the ſaw-duſt of it, and glew it to a ſtick, light it, and put it before their idols, or in any place where they would have an agreeable ſcent.

KOBI, or the *Chineſe* ell, is about fifteen *Swediſh* inches long. It is divided into ten pann, and each of them into ten kanderin. The taylors ells are commonly longer, and their length is ſixteen inches two-thirds. Theſe ells are commonly made of bamboo.

EVERY thing either received or given out is weighed. However, *Spaniſh* money has a fixed price; and a piaſtre is valued at ſeven mes, and four kanderins. At *St. Helena* it is taken for five ſhillings. The *Chineſe* puts his ſtamp upon the piaſtre, the more eaſily to avoid taking falſe ones, which are ſometimes made of tin or copper, plated over with ſilver. For want of ſmall coin, a *Chineſe* has, beſides the weight, a pair of ſciſſars about him, with which he cuts the ſilver money in pieces, and either gives or receives ſuch pieces on buying of goods. Theſe ſciſſars, which are very thick, they call *Kiapp-chin*. When a *Chineſe* wants to cut a piece of ſilver, he puts it between the

ſciſſars, and knocks them againſt a ſtone till the pieces drop off.

KAS, which the *Chineſe* call *Lai*, is the only current coin which is ſtruck in *China*, and is equal both in ſize and value to our one-ſixth ocre ſilver coin. This coin is made of yellow braſs, and round; hath a quadrangular hole in the middle; the edge is plain, but its ſides are marked with *Chineſe* characters.

DATCHIN is their larger weight, with which they weigh by pekul and katty.

LAY-TANG is a leſs weight, with which they weigh little things.

A PEKUL, or *Idaam* as the *Chineſe* call it, is 100 katti, or 139 lb. $21\frac{7}{16}$ half ounces, $\frac{17}{32}$ [s] *As*, victual-weight; but is generally reckoned equal to 142 *Swediſh* grocers pounds.

A KATTY, or *Chineſe Kann*, which is 1 lb. 12 $\frac{11}{16}$ of half ounce, and $\frac{29}{32}$ *As*, contains 16 tel.

A TEL [t], which the *Chineſe* call *Lea*, has ten *mes*, about 14 dollars of copper coin.

[s] The ſmalleſt *Swediſh* weight.

[t] The *Engliſh* write it tale, the *Portugueze* taël. It contains 100 *French* ſous, or $2\frac{2}{3}$ half ounces, and 12 *As*, *Swe-*

A MES

A MES [u], by the *Chineſe* called *Hane*, contains 10 kanderin.

A KANDERIN, or as the *Chineſe* call it *Fann*, is 10 kas.

A KAS, or *kaſh*, is the ſmalleſt coin which is uſed in every part of this country, and its value is about $\frac{1}{6}$ ocre ſilver coin; though *Du-Halde* mentions ſeveral leſs, which perhaps may be uſed in particular places, and be neceſſary only on particular occaſions.

The *Chineſe* count thus:

Yatt [w] *Ydaam*, a pekul. [Tab. xiii. fig. *a*.]

Yatt Kann, a katty or catti. [Tab. xiii. f. *b*.]

Nghee kan, 2 ditto.

Samm kan, 3 ditto. [Tab. xiii. f. *c*.]

diſh victual weight. See Memoir of the *Swed.* Acad. of Sciences for 1750, p. 110, the *Swed.* Edition.

[u] The *Engliſh* write mace, the *Portugueze* maz.

[w] *Yatt*, or *Yett*, is one.

Tſockan, or *ſa kan*, 4, (*Tſin*, *Tſi*, *Tſoe*, or *Tſey*, is 4.) [Tab. xiii. f. *d.*]

On kan, 5. This is liſped through the teeth, and leaves one to gueſs whether it muſt be *un*, or *n*, or *oen*. [Tab. xiii. f. *e.*]

Lock kan, 6. [Tab. xiii. f. *f.*]

Satt-kan, 7. [Tab. xiii. f. *g.*]

Patt-kan, 8. [Tab. xiii. f. *h.*]

Kau-kan, 9. [Tab. xiii. f. *i.*]

Siapp-kan, 10. [Tab. xiii. f. *k.*]

Siapp Tatt-kan, 11.

Siapp-ngee, 12.

Ngee-ſiapp, 20.

Ngee-ſiapp-yett, 21.

Sam-ſiapp, 30.

Tſi-ſiapp, 40.

On-ſiapp, 50.

Lack-ſiapp, 60.

Iſat-ſiapp, 70.

Patt-

Patt-ſiapp, 80.

Kau-ſiapp, 90.

Yett-pa, *Ye-pa*, or *Ghee-pao*, 100.

Ye-pa-yett, 101.

Ye-pa-ngee, 102.

Yatt-tſin, 1000.

Sam-tſin, 100,000.

Siapp-pack-tſin, 1,000,000.

Yatt-leo, a tel. [Tab. xiii. f. *l.*]

Yatt-ſane, or *Siane*, a meſs. [Tab. xiii. f. *m.*]

Yatt-fann, a kanderin. [Tab. xiii. f. *n.*]

Ngee-fuen, or *fann*, 2 kanderins. [Tab. xiii. f. *o.*]

Yatt-lai, a kas. [Tab. xiii. f. *p.*]

SYAN-PANN, or the *Chineſe* accompting-board, is oblong, divided into two equal parts, and has little beads, which are moved backwards or forwards on wires, of which there are ſometimes more or leſs, ſometimes 25 on each ſide. One ſide of each of theſe beads ſignifies

ſignifies one, but on the other it ſtands for five. If you count by thouſands, 100, or 20, &c. the firſt row on the right is one, the ſecond 10, the third 100, the fourth 1000. If the *Chineſe* knew how to reckon with cyphers, they would do their buſineſs very quickly, ſince all their weights, meaſures, and money accompts, are decimals; *videlicet*, when I have 464 kanderins, I immediately ſee they mark four tel, ſix meſs, and four kandarins.

The inhabitants of this country, whom we call *Chineſe*, are quite white, excepting thoſe who are tanned by the ſun. Moſt of them look alike; they have ſhort noſes, ſmall eyes, ſhort black eye-brows, a broad face, great ears, and black hair, which the men always ſhave off, having a tuft at the top of the head, which grows as long as it will, and is made up into a broad ſtiff plait. In this manner the *Chineſe* have worn their hair ever ſince the *Tartars* began to reign over them. They formerly let the hair grow on the whole head, which we ſee the *Chineſe* in *Batavia* do ſtill. Old men, who have few hairs, make their plait more conſpicuous with ribbands, leſt at firſt ſight they ſhould be looked upon as criminals, whoſe hair is cut off, if we may believe their

their own accounts. The men let their beards grow, and divide them into ſeveral locks. The *Chineſe* are ſome of them greater and others ſmaller in ſize than we are. In converſation they are civil: in their demeanor gentle; in ſocial life diligent, having genius for trade in particular: but they are likewiſe talkative, inquiſitive, loving to take preſents; are obſtinate, proud, and ſuſpicious. They ſit upon their feet, for want of chairs. When they meet one another, they lift up their hands; but touch neither hat nor cap, and do not move their feet, but bow a little, ſaying, *Hoaw, Hoaw*,[x] which is a friendly ſalute, with which they wiſh all manner of good to each other. The lower ſort of people kneel down before men of high rank, and ſhew them their ſubmiſſion both by words and geſture.

THE *dreſs of the men* generally is as follows: They wear two wide coats of ſilk or cotton, the lower of which is white, but the upper purple or black; they are like our long night-gowns, and have no lining, ſtiffening, button-holes, folds, and facings; they are buttoned

[x] *Good, Good.* A repetition of the poſitive makes their ſuperlative, as in the *Hebrew* language.

before

before with little round gilt buttons, which are at a diſtance from each other, and catch into little ſtrings, faſtened a little inward, and this makes the coats to be double upon their breaſts. They do not quite cover their feet. The ſleeves are ſo wide and of ſuch a length as to be ſufficient to cover the hands. Their breeches are wide and white, and are laced about the body, and about the knees. The ſtockings are thick, embroidered, and made like boots, of a dark-coloured ſilk-ſtuff; people of quality have the edges and clocks of the ſtockings embroidered with gold or ſilver; ſometimes they are faſtened to the ſhoes, ſometimes not; their ſhoes are like ſlippers without heels, but without quarters, and a white ſole as thick as ones finger; they are as it were chopped off before: the upper leather is embroidered: every thing belonging to them is of hog's leather, and ſewed with cotton yarn. The workmen who are frequently expoſed to the ſun, particularly peaſants and fiſhermen, cover their heads with hats of bamboo, whoſe brims are of different colours. They uſe caps; ſome of which look like an inverted funnel, with a button at the top. They are covered with a tuft of raw red ſilk, which is faſtened at the top, and hangs down looſely to the bottom

bottom of the cap. None but men of high rank make uſe of theſe caps. Others wear caps of black ſilk, with brims of velvet: ſometimes the whole cap is made of velvet, with or without tufts of red ſilk, in threads, which hang at the top; and in the middle is a button of gold, precious ſtone, amber, glaſs-fluor, or even ſomething leſs valuable, according to the difference of rank and fortune of the wearer. No one is allowed to cloath himſelf above his rank. Some men of high rank diſtinguiſh themſelves from the reſt by the badges of ſome orders, which they carry on their breaſts: others carry behind in their caps two ſquirrels tails; and others diſtinguiſh themſelves by the value of the button on their cap. But a *Chineſe* is never ſeen to wear a wig, cravat, ſleeve buttons, gloves, garters, knee buckles, and buckles in the ſhoes; and ſeldom walks with a ſtick. Inſtead of theſe things, their tobacco-pipe, tobacco-bag, and purſe, hang down to the knees by long ſtrings. In winter they frequently put on thirteen or fourteen garments one above another, or get them lined with furs. Inſtead of muffs they carry a live quail (*Tetrao coturnix*) in their hands. The poorer ſort of people are content with a little coat of cotton, with wide trowſers, and with

with caps of bamboo leaves; they go barefoot, and moſt of them are half naked. It is a very common thing to ſee ſmall boats full of naked children, and of half-naked parents, who have no other habitations than theſe on the ſurface of the water, and live by thouſands by fiſhing, picking up old rags, dead hogs, or whatever elſe is thrown from the ſhips.

LABOURERS are obliged to pare their nails[y], but people of quality let them grow as long as they will; keep them very clean and tranſparent, and at night put little caſes of bamboo on them.

THE dreſs of the ladies is little known to me, ſince ladies of faſhion always keep in their houſes. I ſaw, however, a head-dreſs at the goldſmith's, which was twiſted of a coarſe ſilver-wire, and looked like a little baſket; in it were faſtened pieces of red cloth, to heighten the luſtre. Their round ſilk fans are well known. They can ſcarce walk, on account of their little feet. As this inability

[y] Very long nails are a token of elegance, and ſhew that the wearers are arrived at a thorough pitch of genteel helpleſſneſs.

for

for walking is a mark of gentility, people of rank preſs the feet of their daughters from their very infancy in iron ſhoes. It is ſaid that this was a puniſhment on the female ſex, for attempting to betray their huſbands in an irruption of the *Portugueſe*; but they look upon this as an injurious report, which cannot be proved. Common women are every day ſeen, particularly in the boats, and they are dreſſed like men, in a coat and trowſers; but they do not ſhave their heads; they tie their long hair together in a knot at the top of their heads; and faſten it with a great long ſilver bodkin. The hair of the unmarried women is cut on the ſides, and hangs round the head about an hand's breadth. To paint the face, is univerſally the faſhion. Tobacco is uſed only for ſmoaking; but its uſe is very general with both ſexes: and women are frequently ſeen in the boats at the helm, with their children at their backs, and a tobacco pipe in their mouths. The mothers, who always educate their own children, tie them to their backs, that they may not be troubleſome to them in working: and as the children often knock their noſes againſt their mothers backs, it is probable that this is the cauſe of their broad noſes, which are a general characteriſtic of this nation.

nation. The children are adorned with ſilver rings about their hands and feet, and with medals hanging on their breaſts. Their parents tie a gourd, or a large fruit which the *Chineſe* call *Po-o* (*cucurbita lagenaria*) which is ſhaped like a bottle, to their childrens backs, that they may not be drowned in caſe they ſhould fall into the river. The buſineſs of the women in general is to take care of the children, the kitchen, weaving, and ſpinning. The elder children muſt help to carry the younger on their backs. The men help to waſh.

THE eye is every where ſtruck with the populouſneſs of this healthy country, in which the people chuſe rather to want, than to ſeek a plentiful ſubſiſtence elſewhere. They are allowed but little more navigation than what they can carry on by their inland canals. Their foreign trade is chiefly to *Batavia*, and ſome places adjacent. An *Engliſhman*, whoſe men were run away during his ſtay in *China*, could with difficulty get ſo many *Chineſe* ſailors as were neceſſary to navigate his ſhip to the *Eaſt Indies*; though he aſſured them he would ſend them back by the firſt opportunity. The ſtreets are as full of people here, as if there

was a fair every day, at leaſt during the ſtay of the *Europeans* in this country, which is from *July* to *February*.

In *China* are ſaid to be 58 millions of inhabitants, all between 20 and 60 years of age, who pay an annual tax. It is reported that many were ſtarved to death this year on account of the bad crop, and that great numbers were come from different provinces to get their livelihood here. Notwithſtanding the induſtry of the people, their amazing populouſneſs frequently occaſions a dearth. Parents who cannot ſupport their female children, are allowed to caſt them into the river; however, they faſten a gourd to the child, that it may float on the water; and there are often compaſſionate people of fortune who are moved by the mournful cries of the children to ſave them from death. *Le Comte* relates, that in the conqueſt of *Nankin* by the *Tartars*, women were ſold in bags, and he who had bought an old woman, caſt both bag and woman into the river [z]. The boys which cannot be brought up by their parents are educated at the expence of the public.

[z] *Le Comte*, p. 301.

THE language of the country has nothing in common with any other; it has no alphabet, but as many characters and different figures as they have words; which have different significations according as they are differently pronounced, and have different accents; *videlicet*, *Tchu* signifies a maſter, a hog, a kitchen, and a pillar. *Le Comte* ſhews that by the pronunciation only they make 1665 words quite different from each other out of 333. He is reckoned very learned among the *Chineſe* who knows half their words; for they have 80,000 characters [a]; and for this reaſon the *Europeans* think it impoſſible to learn the *Chineſe* language any other way than by abiding many years in *China*; and they likewiſe look upon it as unneceſſary, ſince they can avail themſelves of the *French*, *Portugueze*, or *Engliſh* languages, which the *Chineſe* ſervants employed in trade have learned; though they have a particular dialect, and think that he does not ſpeak well who does not intermingle *Engliſh*, *Portugueze*, and *Dutch*. Some of the *Chineſe*

[a] It is ſaid that the emperor *Koambi*, 4300 years ago, introduced the characters; and afterwards wrote himſelf aſtronomical, arithmetical, and medical treatiſes. *Le Comte*, p. 189.

ſervants

ſervants ſpeak *Swediſh*; we likewiſe ſaw a man who had taken the Roman catholic religion in *Siam*, where he had been taught Latin, which he ſpoke readily. This man's name was *Thomas Tya*, and he related that he was born in *Nanſiong*, a place ten days journey from *Canton*. It is the more difficult for a foreigner to learn the *Chineſe* language, as there is a mixture of nations here, who all diſtinguiſh themſelves by their dialect, beſide the eaſtern *Tartars*, who ſpeak their own *Mantcheore* language. In *Tonking*, *Cochin China*, and *Japan*, they make uſe of the ſame characters as in *China*; however, a *Chineſe* does not underſtand their languages.

Sometimes the names of animals correſpond with the noiſe which theſe animals make; *Miaa*, a cat, &c. The compoſed characters likewiſe deſerve ſome attention; thus *Tſai*, which ſignifies a *misfortune*, is compoſed of *Miane*, a houſe, and *Ho*, fire, ſince they can image to themſelves no greater misfortune than that of a houſe being reduced to aſhes. We can by no means pronounce ſome words ſo well as the *Chineſe*, becauſe to my knowledge the teeth of their upper jaw ſtand out forwards a little: on the contrary,

they are unable to pronounce all the *Swediſh* letters, but pronounce *b*, *d*, *r*, *x*, *z*, like *p*, *t*, *l*, *ſ*, *ſ*; they do not ſpeak alike, and pronounce a great many of their words with a ſinging tone. When they are heard ſpeaking to each other, one would frequently be induced to believe they were quarrelling, in particular when they ſhake their heads, and when they ſpeak very loud, which is the caſe on ſhip board, and in other great companies; where they far exceed the clamour of our pooreſt pot-houſes.

PAPER is made of the inner bark of bamboo (*Arundo bambos*); it is not at all like our paper, except in colour. Their ſheets are as large as four of ours. On one ſide it is as ſmooth as glaſs, but not on the other; and for this reaſon they always lay their leaves double, and always write or paint on one ſide only, and from the right to the left, from top to bottom. The *printing paper* is as thin as an egg's ſkin, for which reaſon the letters ſhow through it. The fine paper which comes to *Europe* with the tea is common enough. A ſort of writing paper ſtronger than the common writing paper, and which is bought by the name of *Macao paper*, is to be had here; it

it may be written on with ink, and in my opinion is to be preferred to any *European* ſort, eſpecially for drying plants. The *Chineſe*, who neither make uſe of pens nor of our ink in writing, but write with hair pencils dipt into *Indian* ink, can very well do with thinner paper. Inſtead of an ink pot, they make uſe of a ſmall marble table with elevated borders, of the ſize of one's hand; this ſerves to mix the *Indian* ink, which, being diſſolved in water, gathers in a little hole at one end of the ſtone.

Books in all ſorts of ſciences are to be had here, ſtitched in thin white paper; but none in a foreign language. The ſize of their books anſwers to that of our royal octavo. All their books are printed with wooden plates, in the manner that the manufacturers in *Europe* print cottons.

Their obſervations on the heavens and earth, and their hiſtory, are remarkable on account of their antiquity [b]. Their morals are looked upon as a maſter-piece; their laws are conſidered as excellent maxims of life; their medicine and natural hiſtory are both of them

[b] According to their accounts, they go as high as the times of *Noah*.

founded on long experience[c]; and their husbandry is admired for the perfection it has risen to. But the want of the true knowledge of the Supreme Being is an imperfection which outweighs all their other knowledge.

The religion in *China* is pagan; but by their own accounts, there are almost as many sects as persons among them: for as soon as a *Chinese* expects the least advantage from it, he is without any consideration to-day of one religion, to-morrow of another, or of all together: however, there are three principal sects, of which we have an account in *Du Halde's* Description of this Empire.

The first principal sect is called *Tao-tsa*, and their founder *Daokiun*. Its followers endeavour to disengage themselves from every thing which tends to disquiet the rest of the soul, to

[c] This is proved by their *Pent-sa-o*, or books of plants, which were wrote by little and little. The emperor *Shinnongs* made a beginning with it, and described 360 medicinal plants, in three volumes. Afterwards several things were published concerning natural history, all which was at last reduced to 16 classes by *Li-khe-tchin*; who likewise added their use in physic, and their other uses. Of this see *Du Halde's* Description of *China*.

live

live free and void of cares, to forget the paſt, and not to be in apprehenſions for the future. They have fictitious ſpirits, which are independent of the Supreme Being, and among theſe they comprehend ſome of their ancient kings. They look upon it as a folly to procure another perſon's happineſs, and loſe their own reſt by it. They brag of a preſervative againſt death, leſt the remembrance of it ſhould cauſe them trouble. They think to get their wiſhes fulfilled by the aſſiſtance of the evil ſpirit. The emperor *Fou-ti* drank ſeveral times of their pretended draught of immortality; but he at laſt found he was as mortal as others, and pitied his own credulity. The heads of this ſect are very learned, and live in towns in fine houſes. Numbers of people come to them out of the adjacent provinces, and fetch remedies for their diſeaſes; and by the way get them to tell them the fate of the remainder of their lives; and the principal man gives them a paper full of particular letters, which they pay for very thankfully. This ſect has decreaſed or increaſed according as the court has favoured or neglected it.

The ſecond and moſt common ſect, are the *Fo*, or *Fo-é*. The emperor *Ming* introduced it

in the year 65 after *Chriſt's* birth, having dreamed of, and recollected an opinion of the great *Confucius*, that the Moſt Holy was to be found in the weſtern countries. He, therefore, ſent to enquire for him in *India*; and his people meeting with the idol *Fo*, or *Fo-é*, they believed they had found the true worſhip, and brought this idol to *China*, and together with it thoſe tales which fill the *Indian* books. This infection began at court, and ſoon took root in the provinces, and afterwards ſpread through the whole empire. Their religion conſiſts in not killing any living creature, for they believe that the ſouls of their anceſtors tranſmigrate into irrational creatures, either into ſuch as they liked beſt, or into ſuch as they reſembled moſt in their behaviour: for which reaſon they never kill any ſuch animals; but while they live feed them well, and when they die bury them with ſplendour [d].

[d] Mr. *Des Guignes*, in his *Hiſtoire des Huns, des Tures & des Mogols*, is of opinion, that the religion or ſect of *Fo* is originally the Chriſtian religion, perhaps corrupted by length of time ſo far as to admit theſe abſurd tenets. Perhaps the decay of his own religion was the only foundation he had for this opinion. F.

Le Comte gives the following account of that which happened to himself: "I once "was called to baptize a sick man 70 years "old, who lived upon a little pension, which "the emperor bestowed on him. When I "came to him, he said, I am much obliged to "you, for you will deliver me from a great "punishment. I replied, This is not all; bap- "tism not only delivers a man from hell, but "it also leads to a happy life. I do not un- "derstand you, said the sick man, and per- "haps I have not expressed myself plain "enough: you know, that I have for some "time lived upon the emperor's bounty; and "our bonzes, who are well instructed concern- "ing what happens in the other world, have "assured me, that I shall be obliged out of "gratitude to serve the emperor after my de- "cease; and that my soul will undoubtedly "animate a post-horse, to bring the posts to "court out of the provinces. They exhort "me, therefore, when I shall have assumed "my new form, to do my duty well, and take "care not to snort, nor to kick, nor hurt any "one. They further exhort me to trot well, "to eat sparingly, and to be patient, in order "to move the compassion of the gods, who "often

" often change a good animal into an human " being, and make a great lord of him. I " own this thought makes me ſhudder, and I " cannot think of it without trembling; every " night I dream of it, and ſometimes when I " am aſleep, I think I am ſaddled, and already " ſtart at the firſt laſh of the rider's whip; " after this, I awake in great trouble and " anxiety, uncertain whether I am a man or " a horſe. But alas! what will become of " me, when I am to be a horſe in reality! I " have therefore taken this reſolution: It is " ſaid, that thoſe of your religion are not ex- " poſed to this misfortune; but that with you " men remain men, and will be ſuch in the " world to come. I beſeech you, receive me " among you. I know it is difficult to live con- " formable to your religion; but if it was " even more difficult, I am however ready to " embrace your faith, and at any rate to be a " Chriſtian rather than a creature void of " reaſon." This ſect particularly prohibits pride, uncleanneſs, and drinking of wine. They acknowledge a God, who dwells in heaven, ſees every thing, rewards virtue and puniſhes vice; for which reaſon, if I made a doubt of what they ſaid, they anſwered with great emotion, that I being a prieſt ſhould aſk

Voſs

Foſi [e] in heaven if it were true or not. Yet they have a very limited knowledge of the Supreme Being; for being aſked who was the Creator of heaven and earth and of every viſible thing, they ſaid it was a great Lord. If they were further aſked, whether he was yet alive, they anſwered no, he died ſome years ago. However, their prieſts, in their morning, evening, and other prayers, and when they ſacrifice, bowed three times to the ground, as if the Trinity was not unknown to them [f]. They are greatly afraid of the evil ſpirit, and believe, that if he was not withheld by a ſuperior Power, he would be able to do as much miſchief as he pleaſed; for which reaſon they pray to him to ſpare them. They have a num-

[e] This is a name they have learned from the *Europeans*, by which they mean *God*; but in the *Chineſe* language he is called *To-en*, heaven, &c.

[f] It is from theſe and the like feeble hints that the party of unbelievers have got ſo frequent opportunities to ridicule the ſacred doctrines of the Chriſtians. Such is the argument of the Trinity doctrine diſcovered even among the *Tibetans*, by a late learned writer, and which he deciphered from an idol with three heads, on a paſte coin, with ſome *Tibetan* characters: which his friend ſo well acquainted in the *Hibernian* antiquities gave out to be an old *Iriſh* Inſcription. F.

ber

ber of tales ready to support the truth of this opinion. They sometimes pretend to see in their rooms small lights which on a sudden grow very large, together with many other things which they attribute to the devil. They believe that the dead come back, and that the deceased husband visits his surviving wife, and the dead wife her husband. This is the reason why at every little alarm in the night-time they are afraid of spectres; and I myself have often seen how fearful they were. But they likewise believe every human being has his angel, who attends him during his life and after his decease. They reckon the sun, moon, and deceased great men, such as kings and the like, among their Gods.

The third sect consists of those philosophers who ground themselves upon the writings of *Confucius*, and the disciples of *Memcius*. *Confucius* [g] was born in the year 551 before *Christ's* birth, in the province of *Canton* in the city of *Kiofian* [h]; his works are highly esteemed, and on account of his excellent morality deserve to be read by those who would embrace the

[g] From *Cun* a peacock, and *Su* the sun.

[h] *Boie's* Journal, p. 79.

good

good and reject the bad. They are printed at *Canton*, and a part of them at *Goa* in *India*, in *Chinese* and *Latin*, under the inspection of the *Sicilian Intorcetta*, subscribed by 16 *Roman* catholic fathers, in the year 1676. *Kircher* promised to publish this philosophy with the commentaries upon it, which he had translated into Latin at *Rome*; but soon after the writings of these philosophers were published in Latin at *Paris*, 1687. The editors of this edition were, *Intorcetta*, *Herdtrich*, *Rougemont* and *Couplet*. However, this edition little differs from that published at *Goa*. A greater book of the writings of this philosopher was that which *Couplet* had with him, which has been published by *Aymon*, after it had been corrected by the most learned members of the society, and some *Chinese*. *Franciscus Noel* published, anno 1711, at *Prague*, the six *Libri Classici* of the *Chinese* empire [1]. The philosophers of the sect of *Confucius* endeavour to persuade the people that the creation and government of the world are effected by material causes, not to mention other unreasonable maxims with which they dishonour their Creator.

[1] *Baieri* Præf. Mus.

THE

THE *Roman* catholics have, by means of the jeſuits and other learned men, converted many *Chineſe* to their faith; but are now expelled the country, after having experienced the viciſſitudes of favour and perſecution; all except thoſe who were allowed to ſtay in the empire (though not at court) in order to teach mathematics, and are, it is ſaid, only about 20 in number. Others hide themſelves in deſarts, or in diſtant villages, waiting for the recovery of the liberty of teaching their doctrine.

THE *Chineſe* prieſts, who in their language are called *Wo-aw-ſiong*, pay their morning and evening worſhip in thoſe idol temples which we call *Pagodas*. They are daily clothed in grey coats reaching down to their feet, with very wide ſleeves. About their necks they wear a large ſtring of beads. Their heads are every where ſhaved. In this dreſs they appear at the above places by hundreds, and go in pairs, one after another, ſeveral times round the altar, at which they ſometimes ſtop, and with a low voice repeat their ſervice, which they call *Wo-aw-ſiong-lam-king*: at which they ſometimes fold their hands, and ſometimes hold them up to heaven. This they continue for

an

an hour together, during which time they look at nobody. During ſervice ſeveral *Chineſe* inſtruments are played upon, at certain times. Sometimes they fall down three times with their faces to the ground, burn incenſe and ſacrifice. They ſometimes go about in the town and ſacrifice in the houſes, and on that occaſion their dreſs is a little different. They do not marry, and eat neither fleſh nor eggs. The chief prieſt of the whole empire is called *Wo-aw Siong Tao*. The people go into the *Pagoda* on certain feſtivals only, when they bring their ſacrifices; but during ſervice they ſtand at the doors, and look in through the rails. However, every body ſays his morning and evening prayer beſides, both in the houſes and in the boats, kneeling before their God; in the latter they light on this occaſion a trough, or *Chineſe* boat, which they call *Lintkyee*, of gold or ſilver paper, which they throw into the water; becauſe, according to their opinion, it will turn into gold or ſilver if it is thrown into the ſea when it is burnt during the muſic of the *Gungung*.

They have four holy feaſts every year; among which is the lanthorn feaſt, which will be deſcribed hereafter.

The

The parents of a boy marry him ſometimes when he is yet a child, and even before the children are born; in this caſe, two men whoſe wives are with child agree, that if one gets a ſon and the other a daughter the children are to marry one another, whether they be born with defects or become maimed afterwards, whether they be handſome or ugly. Or if a man has a little ſon, whom he would gladly ſee married, he goes to the father whoſe daughter he thinks moſt fit for his ſon, ſtrikes a bargain with him about the daughter, and ſettles the day of his ſon's marriage. 'Till that day the bridegroom does not ſee his bride, but muſt be content with the choice of his father. The bridegroom receives his bride at his houſe door, and delivers her to his mother, or to ſome other women in the houſe, while he treats the men in another room. If he does not like his bride he may ſend her home again, but the father-in-law keeps the money which was paid for the bride. Before the *Chineſe* give their daughters in marriage, they teach them to reſpect their fathers and mothers in law, to live peaceably with their ſiſters in law, to honour their husbands, to teach their children, to be compaſſionate towards their ſervants,

vants, to take care of their silk work, to be sparing, temperate, diligent, and patient, not to love pratling, nor to meddle with any thing which does not belong to their housewifry. If they get a son, they make great feasts, and treat such of their friends as have congratulated them on this account, and have made some presents. The third day, when the child is to be washed, the ceremony is still greater; they then in particular eat painted eggs (which are presents of the grandmother), comfits, and other presents. If a man attains to 40 years of age and has no children, he may marry more wives than he has already, to prevent the extinction of his family, provided he is able to maintain them. He may use them as he pleases, and suffers no punishment if he kills his own wife in anger.

NUPTIALS are likewise celebrated in the decked boats, which on this occasion are ornamented as well as can be imagined, both within and without. They put little banners upon the deck of the boat, and hang it round with crowns, flowers, and fruits made of paper, and in the night-time lanthorns are placed on it. During this, several musical instruments

are heard, in particular the *Gungung*, which is uſed on all occaſions.

If a woman ſuffers herſelf to be deflowered, ſhe is carried into the market by her ſuperiors, as ſoon as it is known, and ſold to the higheſt bidder; theſe are bought to be ſervant-maids for life, at the price of 100 dollars copper money, ſometimes more and ſometimes leſs.

Thieves and other offenders are puniſhed with bamboo laſhes, which puniſhment may be compared with the gantelope.

The malefactors are laid on the ground, and beaten with ſwitches of ſplit bamboo wood; and the *Chineſe* ell being made of the ſame wood, a ſtroke with it is very ignominious in the eyes of a *Chineſe*. I likewiſe ſaw another way of puniſhing a thief; a board was hung on his neck, and his hands were put through two holes in the board, and were ſcrewed faſt into them. He was carried about the ſtreets in this poſture for two months together, and was obliged to wait for his further puniſhment: behind the thief went one who was very probably the beadle, holding up money in both hands, undoubtedly to ſhew the people (who come

come from all the ſtreets) what the fellow's crime was.

ALMANACKS, or *Tong-ſioe* of the *Chineſe* [k], were ſold in thoſe ſtreets where fruits were expoſed to ſale. The derivation of the word ſeems to denote, that they formerly may have carved their chronologies in wood, as we on our *Runic* ſticks; for wood in the *Chineſe* language is called *Sioe*, or *Si-e*. Three thouſand almanacks are annually printed for each province. They are either ſmaller ones, or greater hiſtorical ones. I bought one of the latter ſort for eight kandarin, about 12 ſtir. It was for the year 1752, or the 17th year, which they call *Daat ſing kan long ſiapp ſat miang*, or the great emperor *Kang-long's* 17th year, counting from the acceſſion of the preſent emperor to the throne; for the *Chineſe* begin a new period at the beginning of every emperor's reign. This year was to begin with them the fourth day of *February*. The 12 months are marked with large letters at the top of every page in the almanack; each day takes up a line, and in this is marked every thing which may be ſucceſsfully undertaken on that day;

[k] *Bayer* de horis Sinicis. *Petrop.* 1735, 4to.

which are the beſt days for building, fiſhing, travelling, ſowing, offering, bargaining, marrying, &c.

The firſt month hath	30 days.
The ſecond,	29
The third,	30
The fourth,	29
The fifth,	29
The ſixth,	29
The ſeventh,	30
The eighth,	29
The ninth,	30
The tenth,	30
The eleventh,	29
The twelfth,	30

Accordingly their year hath 354 days.

The 11 days which are wanting are ſupplied every third year, which has 13 months. An example of this is the preſent year 1751.

The *Chineſe* divide the day into 12 hours, beginning at midnight; accordingly an hour of theirs is equal to two of ours.

In each town is a tower, and on it an hour-glaſs, with ſand or water, by which the hours are divided.

Days

Days and nights in this latitude being continually equal, we often longed for a thing which we do not take any notice of at home, to wit, the agreeable change of unequal days and seasons.

Soldiers are seldom seen, though the army is said to be very numerous. Those which I saw, had only sabres, and their dress was not distinguishable from that of the other *Chinese*, except by their caps which were like those of grenadiers.

The *Chinese* bought arms of the *Europeans*, especially old muskets and guns, at a very moderate price, and they sold their air guns of yellow brass.

According to *Du Halde's* account, the *Chinese* knew nothing of the management of cannons before the year 1621, when they got three cannons from the *Portugueze* at *Macao*. In the year 1636, when the roman catholics were severely persecuted, and the *Tartars* made inroads into *China*, the government had notice that the jesuits could shoot with guns; father *Adam-schall* was desired to assist them;

however, he excuſed himſelf with his unexperience in thoſe matters. But *Ferdinand Verbieſt*, a *French* jeſuit, and preſident of the mathematical tribunal, very ſucceſsfully fired 130 cannon ſhot, for which the emperor allowed the free exerciſe of his religion.

HUSBANDRY, eſpecially agriculture and gardening, are in a moſt flouriſhing ſtate; but as the *Chineſe* ſow and plant ſuch herbs and trees as we can ſcarcely maintain in our hothouſes, our obſervations muſt be leſs advantageous than if they made uſe of the ſame plants for their food as we do. Their emperors have always ſhewn great regard for agriculture and planting, and even put their own hands to work. *Du Halde* relates that the emperor *Yao* (who, according to the accounts of the *Chineſe*, lived about 4000 years ago) once aſked his courtiers whom he ſhould appoint his ſucceſſor? upon which they propoſed his eldeſt ſon: but the emperor knowing that his ſon's diſpoſition would prevent him from being a good prince, offered this dignity to one of his moſt faithful miniſters, who excuſed himſelf, and propoſed a young country fellow, who in his opinion was moſt able, on account of his fidelity and prudence; for as he

he was able to command his paſſions under a bad father, unnatural mother, and quarrelſome brother, ſo he would likewiſe have ſufficient ſtrength of mind to direct the helm of an empire. They ſay that he really aſcended the throne, and that during his reign he took great care of husbandry, made ſeveral canals for the convenience of the country, and wrote ſeveral books on agriculture. His ſucceſſors have always contributed more and more towards the improvement of the country: in particular the emperor *Ven-ti*, who lived 179 years before the birth of *Chriſt*. He aſſembled his council, and conſulted with its members how his ſubjects, after deſtructive wars, might be moſt ſtrongly induced to practice agriculture. Their reſolution was, that he himſelf ſhould give them a good example. Accordingly he himſelf began ploughing, and the queen planted mulberry trees. This is looked upon as the foundation of a great feſtival which is held every year in *China*. The emperor goes into the fields in ſpring, and ploughs ſome acres to encourage the countrymen; the nobles who accompany him have each their buſineſs; one prepares the ſacrifice, another makes the ſpeech which the emperor is to deliver on this occaſion; another

erects the tent in which the emperor is to eat; and another gets 40 or 50 old venerable peasants together, who are presented to the emperor; the younger ones direct the plough, lead the oxen, and get the corn ready which is to be sowed. The regard of the emperor, and of the greatest lords, for agriculture is such, that when deputies are sent to the governors, the emperor always enquires in what condition agriculture is. The governor of *Peking* often visits the fields, and is greatly rejoiced in case he finds all in a good condition. The emperor *Cang-ti* particularly favoured countrymen; he ordered the governors annually to send in an account of what was most remarkable, because he intended to reward the diligence of the husbandmen with peculiar honours, so that they should be dressed like the king's servants, visit the governor of the city, sit down in his presence, and drink tea with him; and after their deaths be handsomely buried, and a decent monument erected to their memories.

This nation prepares its food in the most simple manner: rice, which they make use of instead of bread, and which is their principal food, they boil in water, letting the water run

run off, and eating the ſwelled rice quite warm. The people in the boats ſeat themſelves about the pot, each has a large tea diſh of coarſe porcellane, into which they put the rice with a ſpoon. They hold the tea diſh to their mouths with the left hand; and between the two firſt fingers of the right hand, they hold two ſlender ſticks, almoſt a foot long, with which they cram one diſh full after another into their mouths. Between this they eat a bit of fiſh, bacon, or a reddiſh fruit like figs, but longer, and almoſt every where equally thick, called *Ay-qua* or *Kea* by the *Chineſe*; beſides this they alſo make uſe of a ſort of greens, which they eat out of another ſaucer along with the rice. The workmen in the factories ſeat themſelves in the yard in a circle, after each has filled his pot out of a great tub, which ſtands by and is full of freſh boiled rice: this is eaten in the ſame manner one pot full after another, along with the other victuals. Thoſe who are ſomewhat higher in quality make uſe of tables and chairs; but have neither table-cloth, knife, fork, or napkins; but handkerchiefs ſupply the place of the latter. Knives are unneceſſary at table, ſince they eat no bread. Fiſh, bacon, &c. are cut into little pieces, and put upon the

the table like the greens, in tea dishes, or little pots, that every one may take what he likes best. Spoons are of use. Their meat has no sauce, nor do they make soups, or the like. Two little sticks for each person, and some tea dishes or pots with meat cut in pieces, make the whole arrangement in a collation. They drink either tea without sugar, or a wretched sort of brandy called *samsu*, during their meals. And with this they treat one another, so that no one drinks off his own cup, but each carries his cup to the other's mouth and lets him drink, and the other returns this civility with his cup of *samsu*. They make no compliments before or after meals. They eat hastily, and take three or four good meals a day. Their provisions are not dear, and it is said a workman may maintain himself upon two stivers a day, (1*d.*) at least one who lives upon plucking of tea leaves will scarce be able to get more a day.

Pork and fish are the common food the *Chinese* eat with their rice. But flesh is less usual; the most uncommon is beef, then goat's flesh and mutton, next rabbits, &c. hares and venison I have never seen. It is said the *Chinese* like horse-flesh, dogs, and rats.

Frogs,

Frogs, called *Kopp-na* by the *Chineſe*, are ſold here in every ſtreet. They tie them together with a thread about their bodies, and carry them alive in baſkets; and they are the dainties of the *Chineſe*, though they are little different from our common frogs, as appears from the following deſcription:

Rana (*Chinenſis*) *palmis tetradactylis fiſſis, plantis hexadactylis digito indice reliquis longiore.* The *paws* have four diſtinct *fingers*, which are almoſt of equal length; but the ſecond and fourth is a little ſhorter: on the feet are ſix joined toes, theſe are palmated: the firſt and third are equally long; the fourth is ſhorter; the fifth ſtill ſhorter; the ſixth, or innermoſt, the ſhorteſt; but the ſecond the longeſt of all. The body is warty at the top, with ſtreaks of black brown; white below: the throat is white, ſpeckled with black: the belly is white, without ſpots, except on the ſides: the eyes are black, the irides yellow gold: the fore and hind legs blackiſh yellow, with whitiſh ſpots on the outward ſide. The [i] *palmæ* and [k] *plantæ* are fleſh-coloured, and inclining to black. I here am put in mind of what I read in the *Turkiſh Spy*, *Lond.* 1748, vol.

[i] Paws. [k] Feet.

vol. iii. p. 167. viz. that the *French* in 1646, began to eat frogs and muſhrooms, being preſſed by hunger.

Buffaloes (*Bos Indicus*) are uſed to plough with, and foreigners buy them to kill. Theſe oxen are generally wilder than ours; however I ventured through the midſt of a whole herd of them. They are generally grey, their hams almoſt ſtrait, ſomewhat angulated. A buffaloe coſts at preſent 10 tel, and a calf two tel and five meſs.

Their goats are (as far as I could ſee) no way different from ours.

The ſheep of this country have little horns, and ſhort tails, which are one lump of fat, and oblong. Theſe ſheep are no bigger than the *Swediſh* ſheep, but grow ſo fat on the dry *Chineſe* mountains, that mutton taſtes better here than in any other place in the world: and they likewiſe ſell dearer than in any other country. A ſheep coſts here 15 plates, and ſometimes more. At preſent it is ſold at four tel and eight meſs, which is thought very cheap. In a climate which is ſo warm, where wool is not wanted, and cotton and ſilk are plentiful, they are leſs neceſſary.

The

The *Chineſe Swine* (*Sus Chinenſis*) are already ſo well deſcribed[1] that I can add nothing. They are generally either black or white. They propagate more than ours, and are cleanly; for which reaſon they are kept in houſes like dogs. They alſo ſometimes go into the ſtreets, but never wallow in dirty places; however, I have been told by one of our husbandmen, that when they come to *Sweden* and ſee the uncleanneſs of our ſwine, they ſometimes take to the ſame manner of living. The *Chineſe* hams are much eſteemed by the *Europeans*. The katty is commonly ſold for one meſs, or a piaſtre apiece, which is nine dollars and ſix ocre copper money; but they are very little, and what they want in weight is made up by a piece of ſtring to which the ham is faſtened. The goodneſs of the hams doubtleſs depends upon the manner of ſalting and ſmoaking, but likewiſe much upon the food of the animal, by which they get a better taſte, and more fleſh. It is more agreeable to nature to allow the animal during its fattening ſome moderate exerciſe, than

[1] *Linnæi* Iter *Weſtrogothic.* p. 62, and Iter *Scanicum*, p. 72.

to

to confine it in a narrow ſtye; in which, though they get more fat, yet it is not ſo good; and who knows whether it is not more unwholeſome?

CHICKEN of ſeveral ſorts are to be met with here, and are ſold at ſuch a price, that a pound came to about 10 ſtivers. But here, as well as in every other tranſaction with the *Chineſe*, you muſt take care of being cheated. One of my countrymen can teſtify this, who buying ſome chicken, the feathers of which were curiouſly curled, found in a few days time, the feathers growing ſtraight, and that his chicken were of the moſt common ſort. The *Chineſe* had curled the feathers up like a wig, a little before he was going to ſell them. This is an inſtance of a *Chineſe* who ſpares neither time nor pains if he can only gain money, whether by fair or fraudulent means.

EGGS were ſold at three ſtivers apiece, (two *cas.*)

THE *Chineſe* gooſe is not unknown to us (*Anas cygnoides* β. *orientalis*); ſome had yellow bills, but they are uſually black. Compare with this *Linn.* Iter *Weſtrogoth.* p. 145.

THE

THE *Chineſe quails* (*Tetrao Chinenſis*) have already been mentioned as being uſed inſtead of muffs by the *Chineſe*. We bought ſeveral females to make into pies on our voyage. We gave three kandarin apiece for them. The cock quails are larger, dearer, and more ſcarce.

CONUS (*Chinenſis*) *ſtriis tranſverſis retrorſum imbricatis*, called *Ha-ing* by the *Chineſe*, is a ſort of almoſt round ſhells; the animal of which is taken out, put into water, and ſold in every ſtreet by the name of *Ha-in-yo*.

As the *Chineſe* live moſtly on roots, fruits, and pot-herbs, the country hereabouts is almoſt all garden. Beſides rice, ſugar-canes, and *Chineſe* potatoes, I have obſerved the following ſorts:

PEASE of ſeveral kinds are ſown here, and likewiſe two ſpecies of beans, which are not uſual in our country, for they require more warmth than our climate affords. I have perfected ſome however in *Sweden* by a hot-bed. One ſort is called by the *Europeans*

CALLVANSES

CALLVANSES (*Dolichos Sinenſis* [m]). They are planted on dry hills, and are treated like dwarf kidney beans. They do not grow high, and therefore do not much want to be ſupported; this however is done in ſome places, and eſpecially where they ſtand in the open fields, which have no hedge or fence round: nor are fences neceſſary, as the cattle are always kept in the paſtures by herdſmen. Theſe beans are of the ſmalleſt kind, and are quite white, except the germen, which is black, but white in the middle. The *Europeans* buy them in great quantities, and make uſe of them in their return from *China* inſtead of peaſe. They have thin huſks, and are very palatable. A katty, which anſwers to a pound we uſe for grocery, was ſold for two kandarin, or about three ſtivers.

LACK-TAO [n] is the *Chineſe* name of another ſort of beans, or rather peaſe, which are much leſs than our wild vetches. The plant itſelf grows like the former, upright, and

[m] *Dolichos* (*Sinenſis*) caule erecto ramoſiſſimo, pedunculis erectis multifloris, leguminibus pendulis; Chinenſibus *Tao*.

[n] Phaſeolus Max. Mungo Perſarum.

wants

wants no ſupport in caſe it is not too much expoſed to the wind. It is treated as the former. With theſe peaſe they feed the parrots. Among the many ſeeds which I brought to *Sweden*, was a kind of ſmall green peaſe, which was ſo nicely eat up by the worms at my arrival, that nothing but the huſks were left, which ſerved as a nidus to the little beetles, with which they were almoſt filled. They were doubtleſs ſtifled in the paper into which I had put the peaſe.

FDAU-FU, or *Tou-fu*, which has been mentioned page 218, was ſold by pieces in ſeveral places. The *Chineſe* ſhewed me a ſort of ſmall peaſe, which they call *U-ang-teo*, and of which cheeſe is ſaid to be made, though the name gives reaſon to conjecture that it has been made from *Tao*, which are the *Chineſe* beans, or *Callvanſes*.

LING-KAMM, or *Leng-ka* among the *Chineſe*, (*Trapa natans* [a]) is a fruit which looks like two horns put together, and has a kernel in the middle. It was ſold in the ſhops which we ſhould call huckſters, and eaten by poor

[a] Trapa bicornis, Vid. Plum. Icon. T. 67.

people. I saw in one place a very small tea pot, whose handle was made of this fruit.

KAMM-KATT is the name of a sort of small lemons, which are not much larger than cherries.

AYQUA, see page 297.

SAMM-NIM is the name which is here given to an oblong, yellow, fourish fruit, with five deep furrows (*Averrhoa Bilimbi*) which has the quality of lemons, but is sooner spoiled. The *Chinese* make a conserve of this fruit, because it then becomes more palatable. I have been told that it is called *Kala-mang*.

LEMTYES (*Citrus medica*). With this compare page 208 [p]. Though the *Chinese* are forbid to sell punch prepared with the juice of *Lem-tyes* to the men on board the ships, yet

[p] The *stem* is round, somewhat rough, ash-coloured, with pale streaks. The *boughs* grow in no particular order, are expanded, bent backwards, and have seldom any thorns. The *young shoots* have strait thorns, which are very sharp, and stand either alternately or in the corners of the boughs. The *leaves* are alternate, lanceolato-oblong, petiolated, somewhat emarginated, The *petioli* are sharpened, and of an equal breadth.

they

they hand many a bowl full through the port holes; but sometimes the sellers have the mortification of not being paid for their forbidden goods, and the buyers get dysentaries or other bad diseases; for the juice which is taken before the fruit is ripe for this purpose, is very unwholesome. The trees which are sold in pots are seldom above a yard high, and looked like lemon trees. A hundred of those fruits were sold for one stiver and a half.

HERE are two sorts of *China oranges* (*Citrus sinensis*). The first is that called the *Mandarin-orange*, whose peel is quite loose, and the *Chinese* call them *Kamm*, and it is the best kind. The peel of the other sort sits close; it is called *Tiang*, or rather *Kang*, the better to distinguish them from oranges.

HERE also are two sorts of *Lemons* (*Citrus decumana*) See page 150, which are called *Yao* by the *Chinese*. The first is round, and its name is *Lo-yao*; and the second, called *Han-yao*, is long, and is usually offered as a sacrifice to their idols.

REINETTES, and other sorts of apples, are eaten in the country; but I doubt whether they grew about *Canton*.

LAT-YEE is the *Chineſe* name of a fruit, which is here eaten with tea. This fruit taſtes almoſt like a ſort of our plumbs, and looks like large gall-apples, covered with a browniſh, thin, and warty ſkin.

LANG-AN is leſs than *Lat-yee*; they have a ſmooth ſkin, and ſweet pulp, as in the *Lat-yee* [q].

PLAINTAIN tree, (*Muſa paradiſiaca*) ſee page 151, is called *Tſeu* by the *Chineſe*. When the yellow ſkin is pulled off, which muſt be done by the fingers without a knife, that the iron may not alter the taſte, the fruit itſelf is as ſoft as dough, and of an agreeable ſweetneſs. It is believed that *Adam* after his tranſgreſſion in paradiſe covered himſelf with the ſpreading leaves of this plant [r].

MANGO (*Mangifera Indica*) is the name of that fruit which is in *China* ſold by the name

[q] An Cuſſambium? *Rumph.* lib. i. p. 154. T. 57.

[r] The *Plaintain tree* has flowered for the firſt time in the year 1755, in the *Upſal* garden, and has alſo brought forth ripe fruits.

of

of *Quaimao*, and in the *Javanic* language is called *Po*.

GUAYAVA (*Psidium Guajava*) is likewise eaten here [s].

ORIENTAL *Muſtard* (*Sinapis orientalis.*)

PACK-LA are *Chineſe olives*.

TAMARINDS, (*Tamarindus Indica*) in *Java* called *Sunda aſſa:* but the tree and fruit are called *Thampahou*.

GOURDS, *Melons*, and *Water-melons*, which are red on the inſide.

LECK of two ſorts, viz. *Tſong*, and *Lofra*. The katty is ſold for two *kanderin*.

RADISHES. A *kanderin* is the price of a hundred of theſe roots.

LONG *turneps*, at one ſtiver and a half the hundred.

[s] The inhabitants of *Java* call it *Nyamba-cuneng*, *Rumph.* I. p. 141. T. 47.

Carrots of the white ſort were not very good. The *Chineſe* pound of them was ſold for four ſtivers.

Gnao, or *Laen-gao* (*Nymphæa Nelumbo*) is a ſort of white roots of the thickneſs of carrots, but longer, articulated like a bamboo-ſtick, and hollow in the inſide. Poor people eat them raw, but they are not very palatable. They are planted in a moiſt clay ground.

O-o-tao are roots ſo called by the *Chineſe*; they cannot be eaten raw, becauſe the acidity would prevent the action of ſwallowing. None of us *Europeans* would taſte them.

Bamboo *roots* (*Arundo bambos*) is what we call *Aſia*, when preſerved with ſalt, vinegar, leek, and *Guinea* pepper (*Capſicum*). This is the only root of all thoſe above mentioned which we make uſe of. A pot of *Aſia* is ſold here for eleven dollars copper money.

Preserved *ginger*, or the *Kaong* of the *Chineſe*.

Dry

DRY *ginger*. This is valued at ſix ſtivers per pound.

FANN-SIO, or *Fay-ſio* [t], the *Chineſe* potatoes, grow with long tendrils, which they extend along the ground. They are multiplied either by planting the tendrils which are cut off in the ground; or by cutting the roots as we do. Theſe potatoes are quite different from ours, and ſeem to be natives of a warmer climate, for they never flower in *China*, ſo that they would hardly grow with us, though they are more palatable, and perhaps more wholeſome than ours. They are planted in the dry ſandy fields, at a diſtance from each other, manured with human dung, and kept clean from weeds, which rule is obſerved in all plantations. A hundred *Chineſe* potatoes were ſold for about one ſtiver and a half.

TDAI-SIO [u], or *Yams* (*Dioſcorea alata*) is a dry root of different ſhapes, about as big as

[t] This plant is, to my certain knowledge, the *Spaniſh* potatoe, *Convolvulus batatas*, Linn. or *Convolvulus radice tuberoſa eſculenta minore purpurea*, Sloane Cat. Mill. Dict. ii. c. fr. *Kalm's American* voyage, Part II.

[u] The ſtems wind to the left, and ariſe between leaf and ſtalk. The leaves are oppoſite to each other, cordato-

two fists, sometimes larger, sometimes less. In many places of *India* it is used instead of bread. The katty was at present sold for a kanderin and two kas. These roots are planted like the potatoes on high places, about half a yard asunder, and a quarter of a yard deep. They grow ten months; and when such a root is taken out, it weighs some pounds. In winter they keep them in sand. Before they are planted, the rotten parts are cut off; and before they are eaten, they are put into water, that their bitter taste may in part be extracted. The lowermost joint of the root is pentagonal, the next hexagonal, the third heptagonal, the fourth tetragonal, which I observed in those roots which I planted in pots, and took with me to *Sweden*; which grew very well. If they bear so great a change of climate, they may very likely in time be inured to our air and short summers, and be of no small advantage to our husbandry.

Sivu, *Chinese* truffles[x], are carried about for sale in the streets.

sagitated or heart-shaped, though almost like the head of an arrow, pointed, and have three strong nerves.

[x] Confer. Siooro tubera esculenta. *Kæmpf. Amœn.* p. 832.

CHINESE

CHINESE *cabbage*[y], is very like our white cabbage. Among all the cabbages which we bought for our ship I did not see one head but they were all in flower. This makes me doubt whether the white cabbage, which in our country requires more than one year before it arrives to fructification, may not by the warmth of this country blossom the first year, instead of forming heads.

CELERY and *Spinage*, which is here called *Bout-say*.

CONVOLVULUS *reptans*, by the *Chinese* called *Or-say*, was sold to our men instead of spinage, but is, in regard to genus, totally different from the true spinage. This creeping *Convolvulus* grows spontaneously every where, in ditches, and low places: of the true spinage I only saw the seeds. We daily eat of the new fashioned spinage, without suffering the least inconvenience. This may give us a hint to make use of our common *Convolvulus* in the

[y] *Brassica Chinensis* or as the *Chinese* call it *Kay-lann*: the leaves of the calyx are alternately narrower. Another sort, which the *Chinese* call *Pack-se-a*, with a bulbose root, is sold here likewise.

fields,

fields, which is very like this *Chineſe* ſpinage, inſtead of true ſpinage.

The leaf of a kind of pepper called *Betel* (*Piper betle* Linnæi) is wrapt about the nuts, which the *Chineſe* are continually chewing.

Chinese *muſhrooms* [z]; of theſe the katty, or pound, is ſold at *Canton* for two *mes*, but they took four kanderin more per katty when they brought them on board the ſhips.

Here is no other water than that which is taken out of the river. For ſix hours together the ſalt water is brought up into it by the tide, and during that time its water is by no means drinkable. And though the water required for common uſes is taken during the ſix hours of ebbing, yet it is ſomewhat brackiſh and muddy. Thus the people here, for want of good water, are obliged to boil the bad, and to mend its taſte with ſome tea.

The *Chineſe* always drink tea without ſugar or milk. The freſh *Honam*, or *Canton* tea, which is not agreeable to other peoples palate, is moſt uſual in town. They make uſe of no

[z] Agaricus Chinenſis, cfr. Fungus, *Kæmpf.* 832.

tea-pot,

tea-pot, but only a tea-kettle, which they put into a wooden veſſel, to keep it warm the longer; but the poor have none but theſe wooden veſſels, without any braſs or copper kettle in it.

CHINESE *brandy*, (*Skee-et ſa oa*) which we likewiſe call *ſamſu*, is never drunk except at meals, and inſtead of tea. It is unneceſſary here to hang up ſigns to denote the houſes where ſpirituous liquors are ſold; for the diſagreeable ſmell of the *ſamſu* is a ſufficient guide.

THE *Chineſe* wine, which our *Eaſt India* traders call *Mandarin* wine, is ſqueezed out of a fruit which is here called *Pauſio*, and reckoned the ſame with our grapes. This wine was ſo diſagreeable to us, that none of us would drink it. The *Eaſt India* ſhips never fail taking wine to *China*, where they often ſell it to conſiderable advantage. The *Xeres*[a] wine, for which at *Cadiz* we paid 13 piaſtres an anchor, we ſold here at 33 piaſtres an anchor. But in this caſe you ſtand a chance of having your tons ſplit by the heat during the voyage. I have ſince been told, that in 1754, the price of wine was ſo much lowered at *Can-*

[a] Sherry.

ton, that our people could with difficulty reimburſe themſelves. The *Spaniards* ſend wines to *Manilla* and *Macao*, whence the *Chineſe* fetch a conſiderable quantity, eſpecially for the court of *Peking*. The wine of *Xeres* is more agreeable here than any other ſort, on account of its ſtrength, and becauſe it is not liable to change by heat. The *Chineſe* are very temperate in regard to wine, and many dare not empty a ſingle glaſs, at leaſt not at once. Some, however, have learned from foreigners to exceed the limits of temperance, eſpecially when they drink with them at free coſt.

BEER, and *ſmall beer*, is not brewed in this country: all the ſtrong beer which is ſold at *Canton* comes from *England*, in very ſtrong casks.

ARRACK is well known among us, ſince the uſe of punch has been introduced. This liquor comes from *Goa* and *Batavia* to *China*, but is not, as ſome have related, made in *China*, of rice alone. It might ſooner be imagined that it is made of *Areca*, ſince this tree is called *Araquero* by the *Portugueze*. If *Arrack* was diſtilled of rice, the *Chineſe* (who have

have such plenty of rice) would, without doubt, take this advantage from others, and keep it to themselves. These people do not want industry. But to make *arrack*, not only rice, and sugar canes, but likewise cocoa-nuts are required, as I have been told by a person that comes from *Batavia*. While a sufficient degree of heat is wanted in *China* for the *Cocoa-tree*, its inhabitants will be obliged to fetch *arrack* from those countries where this sort of palm grows spontaneously; among which *Goa*, on the *Indian* coast, and *Batavia*, on the isle of *Java*, are the most noted. The *arrack* from *Goa* is weaker, paler, more scarce, and commonly dearer, because that place is the furthest off. The *arrack* from *Batavia* is like *French* brandy, but is so variable, that sometimes it is but half as strong as at others, though the price continues the same. For this reason the buyers ought to provide themselves with an instrument, which by its rising or falling shews how strong the *arrack* is. Our *East India* traders buy the *Batavia arrack* from the *Dutch* ships, and the *Goa arrack* from the *English*; but in *Suratte* it may be had at first hand. A liggar of *Batavia arrack* was sold from 44 to 50 piastres; and a quart of it came to 12 dollars of copper money,

money, inſtead of ſix plates, which it was ſold at about two years ago. The duty upon *arrack* is three dollars of copper money *per* quart. The company has lately begun to carry *arrack* to *Sweden* on its own account; all was conveyed before by private perſons, under the name of proviſion for the voyage. It is known to almoſt every one how punch is made; but, that it may be obſerved for the future where it is made to its greateſt perfection, I will mention the true proportion of its conſtituent parts[a]. To a quart of boiling water, half a pint of *arrack* is taken, to which one pound of ſugar, and five or ſix lemons, or inſtead of them as many tamarinds as are neceſſary to give it the true acidity, are added: a nutmeg is likewiſe grated into it. The punch which is made for the men in our ſhip was heated with red hot iron balls which were thrown into it. Thoſe who can afford it, make punch a uſual drink after dinner. While we ſtayed in *China*, we drunk it at dinner in-

[a] If the *Engliſh* reader ſhould be inclined to ſmile at ſeeing a receipt for punch ſo gravely introduced, let him conſider that it proves the ſimple and abſtemious life of the *Swedes*, and how little they are acquainted with thoſe luxuries ſo common to the reſt of *Europe*. F.

ſtead

ſtead of the wine which the company allowed the firſt table.

THE *Chineſe* drink no coffee, except with the *Europeans*, though the berries might be procured from *Java*.

TURKISH *tobacco* (*Nicotiana ruſtica*) which has the colour of our dried *tobacco*, is univerſally ſmoaked in *China*, both by the old and young. Their pipes are long and black; the heads are very ſmall, have the ſhape of the cups of acorns, and are made of white metal. They very often ſmoak while their tobacco pipes hang on a ribband on one ſide.

BLINDNESS is eſteemed the infirmity of this country. Authors relate, that many *Chineſe* are blind; but I have not obſerved it. It is true, they may ſtay in their houſes; but in the ſtreets I never ſaw more than three or four blind old beggar-women, and one or two blind children, among ſo many thouſand people. It was lucky that I found ſo few, as a ſtranger could elſe ſcarcely paſs. For a blind old woman comes with a wooden diſh in her hand, and cries, *Lou-taya Tſlaves-lamma*; if ſhe then catches a ſtranger, by the directions of the other

other *Chineſe*, ſhe hangs with all her might about his feet or body, and cries, with an agreeable look, *Palata*, *Senior* [b], which ſignifies *Money*, *Sir*, and does not looſe her hold till ſhe has been ſatisfied. Some are of opinion that the eating of rice is the occaſion of blindneſs. Perhaps it is the effects of the ſteam riſing from the hot rice. But why ſhould not the ſame happen in other places of *India*, where the ſame food is made uſe of? It may be aſcribed to many other cauſes. The huſbandmen, who have a great deal of buſineſs with human dung, may have their eyes hurt by it. The japanners too may be injured by the ſtrong varniſh, which affects the eyes worſe than horſe-radiſh. The ſtrong ſmoak ariſing every evening from their perfuming chips, may likewiſe contribute to it. I once aſked a *Chineſe* about it, and he told me that the waſhing with warm water, which they do every morning, was the cauſe of it. But none of the cauſes can be conſidered as univerſal, for moſt of the blind people are, according to the accounts of the *Chineſe* themſelves, born blind. And in this caſe, the cauſe is to be looked for in the mother.

[b] From the *Spaniſh* words *Plata Señor*.

FEVERS

FEVERS, and other diſeaſes uſual in our country, are likewiſe not unfrequent here. But thoſe who have had an opportunity of being better acquainted with the ſick in this town, are better able to deſcribe their diſtempers. It is ſaid that a conſumption is in this country cured by a glue of aſſes ſkin, called *Okeeao*. This glue has a very bad taſte, and you either take a piece of it into your mouth, or diſſolve it in tea.

WOUNDS and ſores are the worſt diſorders here. Poor people who are plagued with them, muſt not only ſuffer the greateſt pains during the great heats, for want of ſurgeons; but muſt likewiſe carry their diſgrace about them; and only cover themſelves with mats, when they are obliged to go about the ſtreets.

WOOD is ſeldom or never made uſe of, but coals ſupply its place; and their conſumption is ſo much the greater. There is no occaſion for a fire in the rooms, except in the moſt rigorous cold, or on account of ſick people. On this occaſion the room is warmed by means of a little ſtove, which is ſet in the middle of the room. Theſe little ſtoves are

extremely convenient, and deserve to be made known universally in our country. Some of our company took such stoves with them to *Gothenburgh*, as models for those who might want to know their construction.

THERE is no occasion to fear any beasts of prey; but the men have assumed their ferocity, and assault strangers frequently with stones and insults. Murders are seldom heard of: but a *Chinese* makes very little of stripping people to the shirt. I here will add an account dated at *Canton*, *November* the 7th, 1747. "Captain *Congreve* being happily arrived at *Canton*, with the *English* ship *Onslow*, took a walk upon the *French Island* (an isle near the road where the *Europeans* anchor), where he was soon attacked by some *Chinese*. They took, without much ado, all his money, gold, silver, and buckles; they cut the gilt buttons off his coat, and he would hardly have preserved his finger, if he had not pulled a ring off with all his might and given it them. After he had been quite stripped, he returned to his boat. But the next day, being *Sunday*, he armed his boats, and landed in the same isle with sixty of his men, who had fixed their bayonets, and were

" were provided with four ſmall cannons: he " marched his men before *Wam-pu*, a town in " this iſle, and began to fire. The inhabi- " tants were immediately put into the greateſt " confuſion, and the principal mandarins im- " mediately came to him, to deſire him to " ceaſe the attack, being very willing to give " him ſatisfaction. The captain told them, " that he had been ſtripped the day before, " and now was come to revenge himſelf and " other people who had been inſulted by " thoſe rogues; that he would not ceaſe till " ſatisfaction ſhould be made him by the pu- " niſhment of the malefactors. During this " time, the robbers were ſearched for in the " town, and four of them were apprehended, " who, in the preſence of the captain, had " their hands and feet tied together, and were " ſent to *Canton* to receive further puniſh- " ment [c]."

Plays were acted *gratis* in the ſtreets. A ſcaffold is built quite acroſs the ſtreets, here and there, but commonly at the corner houſes, from one corner to the other. The

[c] A like example ſee in Lord *Anſon's* Voyage round the World, p. 360, &c. *D. Schreber.*

ſcaffold is about ſix yards above the ground, ſo that any one may with eaſe paſs under it. It is cloſely covered with boards, and chairs are placed on it for the actors and muſicians. The players generally wear long gowns, and ſometimes are dreſſed like harlequins. The inhabitants are no doubt better pleaſed with their ſinging, bawling, and mimickries, than the *Europeans*, who are uſed to ſee their own theatrical entertainments much more ſkilfully conducted. Theſe plays are acted in the beginning of autumn, both in the ſtreets on account of good ſucceſs in trade, and likewiſe in houſes after meals, to inſpire the gueſts with mirth. The ſpectators ſit upon the roofs or in the windows, thoſe excepted who ſtop in the ſtreets while paſſing. The *Chineſe* play at cards ſometimes; but their cards have a different form from ours, and have but half their breadth. They likewiſe play at another game which requires a great deal of thought, and goes on very ſlowly, and is managed with two ſtones, which are moved on a board, ſomewhat after the manner of cheſs.

The children play at night with their birds, kites, and butterflies of paper, which they ſend up into the air.

September

September the 8th, 1751.

To-day, being the fifteenth Sunday after Trinity, I preached in the factory in the ſuburbs of *Canton*, and ſome *Chineſe* came to hear me. In the afternoon I paſſed the river in a boat, and landed at the little town of *Holam*, or *Honam*. Here was a large pagoda, or *Chineſe* place of worſhip (if there are not ſeveral one above another); round about it were built houſes for the prieſts and their ſtewards. Between the ſhore and theſe houſes is a broad way, or great ſpace, ſurrounded with large high trees, which were called *Leean-ſee*. At the entrance ſtood two gilt images, ſomewhat bigger than life. On the ſides lay large blocks of wood, which were intended for the imperial palace at *Peking*.

My company ſat down at the uppermoſt *Pagoda* and eat ſome water-melons, but I had a greater inclination towards the plants that grew hereabouts; for which reaſon I went to the other ſide of the houſe. Here I was met by a *Chineſe*, who offered me a filled tobacco pipe; but, on my refuſing to accept of it, he took hold of my coat, and endeavoured

with all his might to take my knee-buckles. I at laſt got rid of this fellow, who, however endeavoured to do me a favour in return, and ſet a number of boys at me, who pelted me with ſand and pebbles. I was therefore obliged to join my company, and give over my amuſement. In the mean while I had found the following plants:

Mirabilis odorata, which grew in the ſame ſituation as nettles generally do in our country.

Convolvulus hederaceus.

Scirpus glomeratus.

Nymphæa Nelumbo, growing in a ditch in the yard, which was dry.

NEAR this place was a garden, but neither entreaties nor money could procure me an entrance. We ſaw *Lemon* trees, and the *Nymphæa*, through the door. We went to the houſe where the ſurveyor of it lived. Here was a little gilt human figure, on an altar, which was one of the *lares* of this *Chineſe*. We were well received in his room: and he immediately ordered a diſh of tea without ſugar, and a tobacco-pipe to be given us, but did not deſire us to ſit down. We were afterwards preſented with two ſorts of fruit, which

in

in their language are called *La-tyee* and *Long-an* [d], and which have already been mentioned. We went further on to the right, into a little wood, conſiſting moſtly of *Bamboo* trees, of which our light *Bamboo* walking-ſticks are made, which we get from the *Chineſe*. The wood is light and exceeding tough, for which reaſon it is more uſed than any other ſort. The *Chineſe* cover their boats with it, and build their warehouſes, called *Banckſhals*, near *Wam-pu*, for the *European* ſhips, of that ſort of wood; and their own houſes are partly of the ſame. It ſupplies them with ſticks to carry any thing upon, for chairs, beds, tables, rails, ſails, angling-rods, hats, caſes for guns, fans, weavers combs, painting-bruſhes, bowers, ſpouts, and troughs for cattle; in which latter caſe, the wood is ſplit aſunder. Theſe *Reed-trees* are of all ſizes, from the bigneſs of a quill, to that of a yard round, and more; and many yards long. The tree flowers, as the *Chineſe* ſay, every ſixtieth year only [e]. It appeared to me that there are two ſorts of this tree in this country: one grew on the hills, no

[d] The leaves of this tree are palmated, and have eleven lanceolated *laciniæ*, ſmooth at top, and downy below. The flowers grow in cluſters, and have five filaments.

[e] In the year 1754 I got ſome flowers from *China*.

higher than about two yards, and is very ramose and full of spines [f]; and the other in lower places, as high as eighteen feet, and without spines [g]. We went through the little wood of *Bamboo* trees, and came to a high even spot, where the *Chinese* buried their dead.

Some coffins stood above the ground, and were put close to the trees like bee-hives. They occasioned a stench, which made me keep off. In this manner they bury those whose kindred is either unknown, or who come from very distant parts.

In the burying-place I found

Euphorbia neriifolia, which is used for hedges.

Solanum diphyllum.

Hibiscus ficulneus.

Frutex baccis albis, foliis obverse ovatis.

Nyctanthes hirsuta: the *calyx* is cylindrical, sexfid, with equal *laciniæ*. The *corollæ* have

[f] Arundo arbor spinosa, *Rumph.* iv. p. 14. t. 11.

[g] Arundo arbor fera, *Rumph.* iv. p. 16. t. 3. cfr. Gron. Flor. orient. 22, 23, *Rauwolf.* iter. p. 97.

eight

eight oblong pointed *laciniæ*, which are ſhorter than the tube: the filaments are ſhort: the *antheræ* are oblong, and longer than the filaments. The leaves are elliptically lanceolated, frequently oval, undulated, oppoſite. The flower ſtalks ſtand between the leaves and ſtem, (*axillares*).

Curcuma Chinenſis.

Gratiola Virginica.

Citrus aurantium.

Clematis Chinenſis: it has many characteriſtics in common with the *Clematis vitalba*; but the leaves are narrow, lanceolated, and the flowers ſmaller.

Achyranthes Chinenſis: the calyx is double, and longer than the pentapetalous corolla, which it includes: the exterior calyx, or flower-cup, is leſs and bifid; the interior quinquifid: the flowers grow at the top of the ſtalks, in cluſters: the flower-ſtalks proceed from the corner of the leaves: the leaves are lanceolated, oppoſite, venoſe, ſmooth: the ſtem is red.

Achyranthes lappacea, fol. oppoſitis.

Carpeſium abrotanoides.

Sida ſpinoſa.

Polygonum

Polygonum Chinenſe.

Vitex Negundo.

Poa Chinenſis.

Poa tenella.

In ſhady places:

Canna Indica.

Caſſica ſophora.

Hedyſarum Gangeticum.

Apluda mutica.

Panicum arboreſcens, which grew out of the wall, is a ſort of graſs of an odd ſort; for it grows to ten or twelve feet high, and is very ramoſe.

As night advanced, we were obliged to return to *Canton*, for which reaſon I reſerved my amuſement for another day.

PHALÆNA *atlas* Linn. is one of the fineſt moths which can be met with[h]. I found ſome of them in a merchant's ſhop: they were all alive, upon a branch of the *Nerium*

[h] Cfr. Petiv. Gazophyl. nat. et artis, decas I. t. 8. f. 7. Papilio Indicus maximus, Valentini Muſeum, ii. p. 168. t. 54.

Oleander,

Oleander, and ſuffered themſelves to be carried on it to the factory, where I ſtuck them upon pins; but the windows being open in the night, a bat came in and eat them all but the wings. However I got ſome afterwards in a little box of inſects, which the *Chineſe* bring to ſell. Theſe boxes were made of *Tya-mock*, and other coarſe wood, without covering, and lined with paper. Such a box full of butterflies, the *Chineſe* ſold at half a piaſtre. In the box were about ten or twelve ſorts, but many of each ſort. In their ſhops are no *Hemiptera* except *Cicada Chinenſis*, nor any *Coleoptera* except *Bupreſtis maxima*. Perhaps it is the opinion of the *Chineſe*, that other inſects do not ſtrike the eye ſo much as butterflies. I ſeldom found any but butterflies in the fields; but it is probable that others may be met with in ſpring, though they were not viſible in the other ſeaſons of the year. The butterflies which were expoſed to ſale in the afore-mentioned boxes were:

Papilio Helena.
——— *Deiphobus.*
——— *Diſſimilis.*
——— *Similis.*

Papi-

Papilio Tryphe.
——— *Agamemnon.*
——— *C. Aureum.*
——— *Orythia.*
——— *Pammon.*
——— *Aonis.*
——— *Leucothoë.*
——— *Demoleus.*
——— *Troilus.*
——— *Paris.*
——— *Midamus.*
——— *Mineus.*
——— *Euippe.*
——— *Almana.*
——— *Plexippus.*
——— *Chryſippus.*
——— *Philoctetes.*

The 10th of *September.*

THE weather was fine and clear, ſuch as it had been for ſome days paſt.

THE

THE fruit of the *Avicennia tomentosa*, which by our apothecaries is called *Anacardium orientale*, was brought hither in a *Swedish* ship from *Suratte*. This fruit in bulk and hardness equals a nut, but is blackish, and somewhat compressed, and contains, instead of a kernel, a thick black juice, with which names are written upon cotton, stuffs, and handkerchiefs, as with ink, though it does not flow so well. The letters are covered while wet with quick lime, which makes them last in washing, and prevents them from hurting the stuff.

I NOW longed to see the country without the town, and some of my fellow travellers honoured me with their company. We had scarce passed through the principal streets of the suburbs, but a croud of boys gathered about us, who perhaps looked upon us as ambassadors from the moon, or some such odd animals, whom they were obliged to attend out of the city with an universal clamour: the croud continually increased, and particularly in the *Miller's-street*, in all the houses of which, on both sides, rice is pounded and ground. Little stones, sand, and dirt being thrown at us, we made the best of our way

out of the ſuburbs, to get rid of our diſagreeable retinue.

We left the city with its wall on the right, and ſaw on both ſides of the road only ploughed grounds, or great narrow clay fields, covered with rice, *Nymphæa Nelumbo*, and *Sagittaria bulbis oblongis*[1]. The laſt mentioned plant is juſt like our *Swediſh* arrowhead above the ground, it only grows larger, which may be owing to the culture; the roots of the *Chineſe* ſort are the ſize of a clenched fiſt, and are oblong, and the *Swediſh* are round, and not much larger than peaſe.

We change the quality of the ground by draining the water, and other arts, till we make it agreeable to our few ſorts of corn; but the *Chineſe* make uſe of ſo many plants for their ſubſiſtence, that they can ſcarce have any ſort of ground, but what will fit ſome one of them. Thus they do not improve the

[1] The *Chineſe* call it *Succoyee-fa*. It is larger than ours: the ſtem and the flower-ſtalks are hexagonal, and pretty ſtrong: the leaves have eleven red nerves, of which the middle ones are ramoſe on both ſides: the leaves under the flowers (*Bracteæ*) are oval-pointed: the flowers are umbellated, and commonly thirty-three in number.

field

field for the seed, but chuse the seed for the field. *Rice* (*Oryza sativa*) grows under water: *Nymphæa* and *Sagittaria* grow in water: *Sugarcane* (*Saccharum officinale*) and *Potatoes* (*Convolvulus Batatas*) want a less moist soil. If it is still more dry, it will do for *Yams* (*Dioscorea alata*). *Indigo* (*Indigofera tinctoria*) and *Cotton* (*Gossypium herbaceum*) grow on the highest mountains. If a mountain should happen to be too dry, it serves for a burying-place. But if a soil be ever so wet, the *Chinese* have a plant that grows in it, and serves for food to men. If we could not imitate the *Chinese* in our tillage; yet we might manage the pastures in the same manner. Let us suppose a piece of ground whose situation will not afford so much fall to the water as to let it run off: now no meadow is so wet but *Poa aquatica* grows on it; which we fetched out of other countries, till we discovered this excellent grass in *Westgothland*, in ponds, rivers, and the like places. No hill is so dry but *Festuca ovina* grows well on it. For want of money, and the workmen necessary to work in the ponds, a poor farm may be greatly improved by a simple imitation of nature; namely, if the husbandman brings such plants upon his meadows as will fit each soil, this

would make up what is wanted, and take up the place of such plants as we should like to get rid of.

But let us proceed on our road, where we saw hedges of *Euphorbia Nerii folia*, or *Fuyong-fa*, here and there twisted along with *Ipomæa quamoclit*, which, with its fine red flowers, would be an ornament even in an arbour. We have likewise found our *Swedish* hops (*Humulus Lupulus*) climbing over the hedges; and likewise *Periploca Græca*, whose flowers seem to be of velvet in the inside.

At last we found a burying-place, where the bones of many of our countrymen rest, as the epitaphs shew. This mountain lies on the right as we come from the town, near the road, without any enclosure, like a common. It is said to be half a mile distant from our lodgings. I found in this burying-place the following scarce plants:

Cassia procumbens.

Crotalaria juncea.

Celosia argentea.

Achyranthes aspera.

And

Caſſida nigra, oblonga, faſciis duabus tranſverſis teſtaceis, punctis quatuor ad baſin.

On our return we met three *Chineſe*, who deſired money; but their demands not being complied with, they attacked us with great ſtones; I in particular was in danger, being ſomewhat behind my companions, in queſt of plants. I found

Torenia *Aſiatica:* the *calyx* is pentagonal, erected; its five ſegments are lanceolated, narrow, and ſhorter than the *tube* of the flower: the *corolla* is lanceolated: the upper *lip* is almoſt entire, and reflected: the lower lip has three *laciniæ*, and is bent downwards. The *filaments* are four, ſhorter than the *corolla*, two of them are even ſhorter than the tube of the *corolla*, they are faſtened in pairs in the lower lip, the two upper ones have a ſterile excreſcence by their ſide: the *ſtylus* is filiform: the *ſtigma* is bifid: the *capſula* is long, and ſeems to be unilocular: the ſeeds are numerous: the flowers are axillar: the leaves are oval, emarginated, oppoſite, and have very ſhort ſtalks.

This plant likewise grows in the rice fields, in the *Danish* island. It may serve now as a monument of the discoverer Mr. *Toreen*, and remind his friends of their loss.

We met a *Chinese* burial. We were then sufficiently protected. There were wooden idols in the procession. First and foremost went two *Chinese*, with little banners; next were the pipers and other musicians, who sometimes sounded their instruments. Behind these, the idol, a gilt human figure, was carried in a palankin; it was followed by the coffin, which was carried on a pole of bamboo. The mourners had white handkerchiefs about their heads. When they have let the coffin down into the grave, they lay a couple of stones upon it, and besides that, for the subsistence of the dead, and for the reconciliation of the idol, they put rice, fruit, tea, money, &c. by him. At night they likewise perform all sorts of musick in the boats, and row up and down the river in them.

Wives and husbands only mourn 49 days, or seven weeks, for each other. No *Chinese*, and much less a foreigner, can be buried in the

the town. I once aſked a *Chineſe* whether, at leaſt, people of the higheſt rank were never buried in the town? Is this, ſaid he, with a ſneer, your cuſtom? And I anſwering in the affirmative, he proceeded to ſay, What honour can this poſſibly be to the deceaſed? We bury our dead in the free, blooming fields, and erect a ſtone by the ſide of their graves, on which all their remarkable actions are inſcribed, that every body may read them. If we ſhould bury them in the houſes, they would be noiſome to their children, and their merit would, as it were, be buried with them.

THE *Chineſe* graves are made on the ſide of hills, and look like ice-cellars. They are elevated on both ſides with ſtones. Inſtead of the door ſtands a ſtone, on which the epitaph is hewn in large *Chineſe* characters.

September 11th.

I HAD a mind to have a nearer ſight of the *Mooriſh Pagoda* (*Delubrium Mauritanum*), which is at a good diſtance from the *European* graves: for this reaſon I left the town by the ſame road we had taken the day before, in com-

pany with Mr. *Braad*, whose attention to all that is curious is well known, and two other gentlemen. On the road, a *Chinese* covered only with rags ran after us, and desired *Kamsa-a*, or alms. We did not mind him, but went on as fast as the great heat would allow; but he came nearer, and pulled one of us by the coat, and would not leave his hold till he had money given him. We did not know how to act; for though we could have made him depart, we were afraid that by his cries he would bring hundreds of the *Chinese*, who were every where working in the fields around us; to whom we could not have proved our innocence, since none of us understood the language. When we were in doubt what we should do, another *Chinese* came and lashed our follower about the legs with a whip, which made him cry out exceedingly, and jump into the rice fields, where he was up to the knees in mud. This man called himself and his comrade officers of the government; he afterwards accompanied us to the *Pagoda*, which lay upon a high mountain, and its inside was somewhat different from that of the *Chinese* temples. Having observed all the trees that were planted hereabouts, we made haste back. In the hurry we found no other than

than the trees which have already been mentioned before, except the *Plaintain* tree (*Muſa Cliffortiana*), which was now fully in bloſſom.

GOING down the hill I obſerved the *Té-limm*, or *Melaſtoma octandra*, on both ſides of the road. This little plant is an ornament to the moſt barren hills, by means of its red flowers, which ſtand open during night, at leaſt a long while after ſun-ſet, while others are cloſed to eſcape the nocturnal dews, which would injure the tender parts of the flower. Its deſcription is as follows:

THE *calyx* is urceolated, or cylindrically oval, covered with ſtiff, ſhort briſtles, and includes the *germen*; its ſegments are quinquefid, equally brown, and downy, except the five leſſer ones in the inciſions: the *corolla* is pentapetalous; the petals are obovated, and faſtened to the inner margin of the *calyx*, whoſe ſegments they ſurpaſs in length: the eight *filaments* are ſubulated, inflected, and faſtened to the *calyx*: four of the *antheræ* are equally broad and erected; the other four are ſterile and hamoſe, and longer than the filaments; they are all inflected when they are not yet evolved: the *piſtillum* is longer than

the *ſtamina*: the *germen* is almoſt round (*obrotundum*): the *ſtylus* is pointed and bent at top: the *ſtigma* undivided: the *ſeed capſula* is an almoſt round urceolated berry, which is black without, but red within, and is ſurrounded by a ſetiferous *calyx*. The *ſeeds* are numerous, very ſmall, almoſt in form of rings, and diſperſed in the berry. The *plant* is buſhy: the *root* is ramoſe, creeping: the *ſtalk* is round, and lies on the ground: the *leaves* are oval, a little emarginated, trinervous, oppoſite, and petiolated: the *flowers* are on the top of the branches. I found another plant here, the flowers of which, by a curſory view, was like the preceding; though it is quite different from all the other *genera*: in the natural order it is like the *Lyſimachia*, and the *Chineſe* call it *Komm-Heyong-loaa*, or *Feather of Goldroſes*. Sir *Charles à Linnè*, thinking that my labours deſerved ſome remembrance, has thought fit to call this plant *Oſbeckia Chinenſis* [See Tab. ii. f. 1, 2. 3.]. The whole plant is ſold in the apothecaries ſhops; they boil it together with old *Kuli-Tea*, and drink the decoction in colics. In ſtrains and ſwellings it is uſed in the bath. The following are the characteriſtics of the plant;

THE

THE *root* is woody, and sometimes consists of a little knob with branches, but sometimes it has no knob; it is perennial, and sometimes shoots into a number of stalks: the *stalk* is quadrangular, of the thickness of a pack-thread, seldom exceeding half a yard in length, generally ramose, and sometimes like a little bush. The branches, which are quadrangular and somewhat hairy, are commonly opposite, and single, or not divided. On the top are commonly two flowers, surrounded with four leaves, two of which are short, but longer than the flowers: the leaves are opposite; each couple is about an inch or more from the other, and the nearer to the flower the further asunder. They are somewhat obtuse in young plants, and about an inch long; but in old ones they are longer, and run sharp: those which grow at the bottom of the branches are frequently as long again as the others. They have most of them no *petiolus* or stalk, and are lanceolated sometimes, yet narrower; almost every where of equal breadth; have entire margins, are covered on the upper side with stiff hairs, which lie down, and have some thin down on the under side only, on the margin, and upon the three veins, which

run almoſt the whole length of the leaf, in a ſtrait line. The *calyx* is monophyllous, campaniform, or bell-ſhaped, quadrifid, with four oblong, ſharp ſegments, which are ſomewhat downy on the out ſide; in each inciſion is a *ſquamula*, with hair on its margin. The *corolla* conſiſts of four upright, oval, red petals: the *ſtamina* are eight in number, narrow, inflected, and, together with the petals, faſtened to the *calyx*: they are the ſame length with the *calyx*, and are accordingly ſhorter than the petals: the *antheræ* are upſtanding, oblong, and end in a point which looks like the *calyptra* of a moſs. The *piſtillum* has an oval *germen*, a narrow and bent *ſtylus*, and a ſhort entire *ſtigma*: the *capſula* looks like a little pot, runs narrower towards the bottom; is quadrilocular, and on the outſide covered with the tube of the *calyx*. The *ſeeds* are numerous, ſmall, and in a microſcope look like little worms, which lie in a circular form.

Coming down the hill between the rice fields, we ſaw, in a field which was partly covered with water, *Impatiens Chinenſis*, which, if taken particular care of, might be made to

adorn our windows with its fine red flowers, in the same manner as its relation the *Balsamines*.

Towards the city we found a species of small bushes (*Cryptanthus Chinensis* [k],) of the size of gooseberry bushes, which had white double flowers. The leaves are as large as those of the *Rose-mallow*, cordated, obtuse; their margin is unequally serrated; they are somewhat rough at the top, but smooth below, and have at least eight pretty large veins. The flowers grow in bunches, at the top of the branches.

Our companions, who joined us without being asked, called themselves government officers; and having reminded us of their rewards, put their whips into their pockets. We desired them to accompany us as far as the factory, where we would pay them; but they refused, and left us.

[k] With opposite leaves. The bush bears a great resemblance to a *Blackberry* bush.

September

September 12th.

AMONG the hay which was given to our cow in the factory, I found the following scarce grasses, which would adorn the *Hortus siccus* of an *European* botanist:

Nardus articulata.
Agrostis Indica.
Panicum crus Galli.
——— *Dissectum.*
——— *Patens.*
——— *Brevifolium.*
Andropogon Schœnanthus.
——— *Ischæmum*, and likewise
——— *Fasciculatum.*
Hedysarum lagopodioides.

THE *Chinese* needs not make hay for his cattle, for they may run all the year in the pastures. He does not want cows at home, for he can do without milk, butter and cheese. He does not want horses, for he either goes on foot, or is carried in a chair. Thus can a *Chinese* employ all that time in agriculture, which

which in our country is ſpent in improving the growth of graſs, and in the hay harveſt. But he is obliged to have continually a perſon with his cattle, in order to prevent their doing any damage in the plantations; for, if they are ſurrounded with a thin hedge, it is too weak to be capable of keeping off unruly oxen. All other fences are unuſual in *China*, though perhaps a little ſpot within the hedge may be ſurrounded with a wall of common pebbles.

This day I returned on board, to look after the ſick.

The *French Iſland* is an iſle in the river of *Canton*, which is reckoned to be two *Swediſh* miles from that place. The *Chineſe* name of the iſland is ſaid to be *Som-ſo-ang*. It has the name of *French Iſland* becauſe the *French* ſhips have their *bancſhal*, or warehouſe, on it. Near it is the place where the *European* ſhips ride at anchor; and when the ſailors have a mind to divert themſelves on holidays upon *Chineſe* ground, they go hither, becauſe they are, in ſome meaſure, ſecure from the inſults of the *Chineſe*. The love of plants likewiſe drew me thither, as to a place where for ſome days

days I could not want new objects. I could here meet with nothing that decorates our *Swedish* soil. Trees, herbs, birds, insects, nay the earth itself, was a new sight in my eyes. On this island (for so I call it, though I have never been far enough on the other side of it to know whether it is one, or whether it is joined to the continent) are two steep mountains toward the river, with horizontal stages, or terrasses, like steps, on their sides, on which indigo, cotton, and *Chinese* potatoes, were planted. On the lowest terrasses, on the side of the *bancshall*, are several graves of our countrymen, *Danes*, and *Englishmen*, who died here some years ago, as the inscriptions on the tomb-stones show. For each corpse which is interred here, we pay one tel, four mess, eight kanderin, to the *Chinese*. Somewhat higher is a *Chinese* burying-place; and at the top grow fruit trees, such as *Lang-ann*, &c. and the *Chinese Pine* (*Abies Chinensis*).

The *soil* on the hills consists of a reddish sandy earth, which by the great heat often cakes, and forms a friable sand-stone, excepting the surface, which is kept loose by dung and vegetable earth. In these hills are great and small quarry-stones, some of which are like

like cryſtals, but opaque, and of the colour of coarſe writing paper. The higheſt hills ſeldom produce any thing beſides ſome dry graſſes and trees, and theſe but very ſparingly. This is the reaſon why they are uſed for burying-places, or they let cattle graze upon them; but, theſe excepted, it is very difficult to find a place which is not uſed for gardens, plantations, or ploughed land. Cattle are kept here, but in ſmall numbers; but what dung is loſt by this means, is ſupplied by another kind of manure before mentioned; and beſides that, by bones, aſhes, hair, men's beards, and many other things, which we make no uſe of. The *Chineſe* never fail carefully to gather the bones (which are elſe thrown into the river) from the *European* ſhips. I have been told, that they burn them, and extract a lye from the remainder, with which they waſh their cotton ſtuffs, which are always whiter in *China* than we can make them; and for this reaſon we ought to try the experiment.

THE *Cotton plant* (*Goſſypium herbaceum*) was now in bloſſom, and had fruit. It is annually ſown in the high grounds, and commonly in rows,

rows, which are at half a yard's diſtance from each other.

THE *Indigo plant* (*Indigofera tinctoria*), by the *Chineſe* called *Tong-am*, or *Va*, is annually ſown in high places, and is in flower almoſt at the ſame time with the *Cotton*.

AMARANTHUS *triſtis*, or the *In-ſoy* of the *Chineſe*, likewiſe grew here. I have been told, that its leaves are uſed inſtead of Cale.

SOLANUM *diphyllum* likewiſe, but very ſparingly.

SUGAR *cane* (*Saccharum officinarum*), the *Chineſe* name of which is *Kee-a*, was planted in rows between the hills. The plants were tied together, to prevent their bending to the ground. They were above a fathom long, but I could neither at that time nor afterwards diſcover its flowers. *China* therefore is not the place whence it originally came from, which muſt be a far warmer climate.

RICE (*Oryza Sativa* [1]) is by the *Chineſe* called *Waa* while it is yet in the ground, but

[1] From this account we may judge of the poſſibility of ſowing rice in *Germany* with advantage.

Wo-ko-k

Wo-kock when it is not yet pounded. The rice groats before they are boiled are called *Mahee*, and when they are boiled they go by the name of *Fann*. Rice is at firſt ſown in *April* in high places; when it is grown half a yard long, it is dug out of the ground, and tranſplanted in rows upon a deep clay ground, in ſo low a ſituation, that it is always laid under water by the tide for ſix hours together, and then is left dry for ſix hours next following. Accordingly rice requires a natural ebbing and flowing, and a warm climate. If this were not the caſe, it would be worth while to plant it on our ſhores. The ground on which it grows is called paddy-ground by our people who go to the *Eaſt Indies*, and conſiſts for the greateſt part of a blue clay, which looks brown at top from the different manures. The *Chineſe* make uſe of a kind of dung which we reject, to manure their rice fields and other fields with, though not very plentifully: it occaſions a great ſtench upon the grounds in dry places; but in the rice fields is ſo tempered with, or waſhed away by, water, that it is but little regarded. The dung is brought to the innermoſt bays of the water, in order that when it runs into the land every part of the field may have its ſhare. When the water cannot

cannot overflow the field, this inconvenience is remedied by water machines, but moſtly by two *Chineſe* who ſtand near the water, and water the ground with buckets. To each of the ears of the bucket they faſten a ſtring, and ſtand oppoſite to one another, each twiſting his cord together: they then ſink the bucket into the water, and when it is full each pulls at his ſtring, by which means the bucket is both drawn out of the water and overturned by the rope that was twiſted together and untwiſts itſelf; and by this means the water runs over the higher rice fields, which cannot be overflowed. Ditches are ſcarce obſervable in the rice fields; but there are little canals, in order to enable them in harveſt time to get between with their boats, and carry the rice from them to the high places, in order that it may be dried, after that they have paid the tythe in the cuſtom-houſe. This ſpecies of corn bears very plentifully here, but coſts a deal of labour. The bread which is baked for the *Europeans* (a katty or pound of which at preſent was ſold at four kanderin two kas) is not made of rice, but of wheat, which, together with rye and barley, is ſaid to grow further up in the country. When the *Chineſe* mix rice flour with it (which they often do unleſs

RHAMNUS Lineatus.

unleſs you take great care) it renders the bread heavier and leſs palatable. About the hills we met with ſeveral ſcarce plants, and among theſe were:

Polygonum barbatum, by the *Chineſe* called *Ka-yong-mœa.*

Polygonum orientale, in the *Chineſe* language *Yong-mœa.*

Rhamnus lineatus, inermis, floribus hermaphroditis, foliis ovatis integerrimis multinerviis. [See Tab. vii.] A buſh which till now has eſcaped the notice of botaniſts. It often grows to the height of a man, and is remarkable for its ſmall and beautiful leaves, which are of a yellow-green colour below, and have red veins: the *antheræ* are black.

Valeriana Chinenſis.

Hedyſarum triflorum.

Nardus ciliaris, in high places.

Viſcum baccis rubentibus. Kæmpf. Amœn. 785.

Convallaria Chinenſis, foliis linearibus, corollis ſex-partitio. This ſpecies of *Lily of the Valley* is a medium between *Scilla* and *Convallaria.*

It grows below and along with *Canna Indica*, in ſhady places.

On the road I found:

Torenia Aſiatica. And in poor ground,

Lawſonia inermis.

Melaſtoma Malabarica, with fine red flowers.

Hedyſarum Hedercocarpon.

Urena lobata.

Aira ſeminibus hirſutis, ariſtis terminalibus flore longioribus.

Scirpus (Chinenſis) culmo triquetro ſubnudo, ſpicis ternis ſeſſilibus terminalibus, involucro diphyllo reflexo; a ſpecies of graſs with long narrow leaves, one of which, next the ear, is much longer than the reſt. In *Van Reede's Hort. Malab.* tom. xii. p. 71. t. 38. is a print of it, under the name of *Motte pullu.*

Ixora coccinea, by the *Chineſe* called *Kanlong-fa*, or *Emperor's flower*, is a ſhrub, or ſmall tree, which grows every where hereabouts on the hills, a yard high; but has the fineſt red flowers, in bunches at the tops of the branches. I made the following remarks

remarks upon it: The ſegments of the *calyx* are obtuſe: the tube of the *corolla* is very long: the *filaments* are very ſhort, inſerted in the inciſions of the *limbus*: the *antheræ* longer, pointed and inflected: the *germen* is very ſmall, and ſomewhat ſhorter than the *calyx*: the *ſtylus* filiform, longer than the tube: the *ſtigma* pretty thick: the leaves are oppoſite, oval, without inciſions, almoſt without ſtalks, and ſmooth. On account of theſe magnificent flowers this ſhrub has got a place in the *Chineſe* gardens, where it grows higher than a man's head. I here am put in mind of the many fine flowers which grow ſpontaneouſly in *Sweden*; which, if they were tranſplanted into gardens, would look better than many of thoſe which we get as ornaments from the moſt diſtant places.

Between the ſtones on the hills, grew,

Nauclea orientalis.

Spermacoce verticillata. The *antheræ* are oblong and upright: the *piſtillum* is longer than the *corolla*: the *germen* is ſmall: the *ſtylus* hairy: the *corolla* is rolled downwards: the *leaves* lanceolated, oppoſite, with

nine nerves, and gibbose: the *flowers* grow verticillated.

Near the rice fields the following plants were in bloſſom:

Verbeſina proſtrata.

——— *calendulacea.*

On the hills were:

Polygala ciliata.

Lycopodium varium.

——— *nudum.*

——— *cernuum.*

Polypodium criſtatum.

——— *Barometz.*

Jungermannia Chinenſis. Dill. Muſc. 64. f. 4.

Lichen Chinenſis, or *Lichenoïdes glaucum perlatum, ſubtus nigrum et cirrhoſum*, Dill. Muſc. 147. t. 20. f. 39.

Agaricus Chinenſis, ſtipite albo, ſpithomeo, pileo luteſcente.

5 *Blechnum*

TRICHOMANES chinense

Blechnum occidentale.

Trichomanes Chinenſis. [Tab. vi.]

Of Inſects I found:

Cancer oryzæ, a ſmall kind of rough crabs, which crept about the rice fields.

Solanum *Indicum* grew by the graves. On this ſpinoſe plant I found a grub, which I kept and fed in my hut till its third change, which was into one of the *lepidoptera* kinds. The wondrous changes of theſe little creatures may inſpire us wretched men (who are juſtly compared to worms in Holy Scripture) with the ſublimeſt thoughts. The grub in its firſt ſtate was reduced to creep over its little world with juſt as much trouble as we creep on earth and ſeek our ſubſiſtence, frequently with the greateſt fatigue: how many needleſs journeys do we take, and to how many dangers are we expoſed! one worm does not ſpare the other on the road. And as the grub in its next change into an *aurelia* enters into a dark houſe, in which it loſes every ſenſation of former pleaſures; thus we deſcend into the obſcure grave, where we reſt the appointed ſpace: but when

the grub has ſtaid its proper time in its narrow lodgings, without any nouriſhment, it at laſt appears, by its third change, in its true perfection and ſplendor; often enriched with the moſt glorious colours. This gives an excellent hint, that the grave ſhall not for ever hold our bodies; but that at laſt, at the general reſurrection on the laſt day, we ſhall be cloathed with ſplendour and glory.

Larva Solani Indici. It is ſmooth: together with the head and tail, it is of the length of a ſpan, and of the thickneſs of an eagle's quill. That articulation which contains the head has a great black line on the ſides: the mouth is large: the *antennæ* are thickeſt at bottom, white, with blackiſh-brown tops, and two black rings. The three pair of fore legs are black, have claws, are dotted with white, and are placed at the firſt, ſecond, and third articulation, beginning at the head. The five pair of hind feet are faſtened to the ſeventh, eighth, ninth, tenth, and tail articulation; they are ſhorter, truncated, green, and have as it were ſhort briſtles at their extremities; the fourth, fifth, and ſixth articulations have no feet. The body is green below: the ſides have nine black ſpots: the equilateral triangles

(of

(of which one ſurrounded the other), which ſtand on each articulation between the fourth on the back and the tail, are ſhaded with green, yellow, and blue, (the loweſt is yellow) and dotted with black. The tail is ſharpened in form of a horn, and conſiſts of many joints.

The *Croton ſebiferum* was the food of another kind of *larvæ* or grubs (*Larva feneſtrata?*); which, the next night, changed into *aurelias*. The *larvæ* were green, with many rows of blue ſpots. Of their change into moths you will have an account the 3d of *February* next year. On the road I found, beſides the *Caſſida cinerea*, a *Swediſh* inſect, the *Coccinella ſeptem-punctata*, which ſeems to have been brought by chance from *Europe* as it were in exchange for the *Blatta orientalis*.

The 14th *September*.

The hoppo, happa, or firſt inſpector of the cuſtoms, (ſee p. 216.) whoſe buſineſs in particular it is to meaſure the newly arrived *European* ſhips, came to us to-day. He ſent his own ſtairs, covered with red cloth, before him, by which he was to aſcend into the ſhip; and afterwards

came in a great ſampane painted with red, accompanied by ſome muſicians, to entertain him in his paſſage. In his train were, beſides his ſervants, beadles and ſoldiers, who had each their badges; ſome had feathers in their caps, others had ſabres at their ſides, one had a belt hanging from his ſhoulder, another held the umbrella over him while he got on-board. After he had ſeated himſelf, he ordered two of his attendants to meaſure the length and breadth of our ſhip with a rope: this admeaſurement came very high in price to us; for by his own deciſion our ſhip was obliged to pay 600 piaſtres, or about 6000 dollars of copper, for duty. He, in return, preſented the ſhip, as uſual, with two live oxen, eight bags of flour, eight pitchers of *Chineſe* wine, &c.

Both on his arrival and at his departure, 16 canons were fired off.

The 15th of *September*.

A Chinese *ſhining inſect* ſat on the ceiling of the great cabbin, and gave a conſiderable light in the dark.

It

It was the *Cantharis Chinenſis* (*Lampyris Chin.* Linn.) *thorace & elytris teſtaceis, apice nigris.* The *thorax* and the *wing-caſes* are highly marginated: the *ſcutcheon* is black: the *wings* are black: the *feet* are blackiſh: the laſt ring of the *abdomen*, or belly, is of a browniſh-yellow; but the laſt but one is white below, and this is it which ſhines like fire in the night time: the two rings next to this are blackiſh: the *breaſt* is browniſh-yellow.

September 17th.

As I landed at the *Bancſhal*, I again ſaw the *Gobius pectiniroſtris* and *niger*, which I have already deſcribed, page 200 and 201.

Cyperus *odoratus.* The ſtalk of it is triquetrous, but round near the root; with a ſhort, even, obtuſe leaf, which ſurrounds the ſtalk towards the bottom.

The 18th of *September.*

To-day the firſt *Chineſe* boat came on-board with porcellain in cheſts, and bales for the company's

company's account, and ten *Chineſe* boys who were to ſplice cables.

The 22d of *September*.

After I had preached and adminiſtered the ſacrament, I was tempted by the fine weather to make a little excurſion on the *French Iſland*, where I found the following plants in flower:

Barleria criſtata, [Tab. viii.] by the *Chineſe* called *Ablieyfa*, is a ſhrub which exceeds three yards in height. The ſtem is ſo weak, that it cannot ſtand upright without a ſupport. Its flowers are blue, and fall off eaſily: the tube of the *corolla* is bent: the *filaments* are faſtened to its lower part; two of them are very ſhort, and two almoſt as long as the *piſtilla*, beſides a barren one: the upper lip of the *corolla* is broad and oval, the lower is quadrifid, with long ſharp points.

Chineſe Gourds (*Cucurbita Chinenſis*) grew here and there ſpontaneouſly; and in other places they were ſupported near the houſes by little ſticks, or ſhrubs.

Convol-

Barleria cristata?

Convolvulus Pes capræ, a plant with thick leaves, whose ſtalks lie on the ſea-ſhore, which is ornamented with its red flowers.

Urena Chinenſis, caule erecto, floribus majuſculis, grew at the foot of the hills.

Verbena nodiflora, with its flowers, hung from a wall not far off the ſhore. I found it no where elſe. It is one of thoſe plants which ſhew how much *America* is like *Aſia*; for it is to be met with in both.

Pa-kock-fa, or *Morinda umbellata?* grew on the ſhore, together with the *Periploca Græca*. The flowers of the latter are an ornament to our hot-houſes, on account of their velvet colour.

Muſſænda frondoſa, is a ſhrub which the *Chineſe* call *Kaulimang*. It grew ſome yards high, and, on account of the weakneſs of its ſtem, it likes to lean on other trees. It ſpreads its boughs over the *European* graves. The following is its ſhape: the *calyx* is monopetalous, divided into ſix parts, and briſtly: its *laciniæ* are long, narrow, and pointed: the *mouth* (*faux*) *of the corolla* is hairy: the *limbus* of it is expanded, horizontal, ſexfid, with pointed *laciniæ*: the *filaments* are commonly five

five in number, sometimes six, and even seven, all very short, and fastened about the middle of the tube. The *antheræ* are erected, of equal breadth; many times as long again as the filaments, and touch each other at the *limbus*: the *germen* is almost round: the two *styluses*, which are joined together, are thread-shaped: the two *stigmas* are simple: the *stem* is round, hairy, brownish: the *leaves* are opposite, lanceolated, petiolated, not divided, reflected, have five nerves, and are downy, particularly below. The *flowers* sit close together at the ends of the branches; they are yellow, and have sometimes oval, white, petiolated *bracteæ*. The *seed capsule* is oblong, unilocular. The *seeds* are numerous and very small. It grows near the shore among the *Zanthoxylum trifoliatum*, and in other places.

The 23d of *September*.

Another boat with porcellane came to our ship. The air was fine.

Kay-po-y, *Diodon ocellatus* (*Tetrodon ocellatus* Linn.) is one of the finest fish I ever saw, but so poisonous that whoever eats of it generally dies in

in two hours time. The *Chinese*, who affirmed the fact, seeing me take the fish into my hands, earnestly desired me to wash myself, adding that it is forbidden under some great penalty, to be sold among other fish. It is very like to the *Tetrodon lagocephalon*, and is able to blow itself up, which makes its fore part look like the breast of a cropper pigeon. Yet it differs in some things from the last mentioned fish, as in the number of rays in the back-fin, which is seldom found to vary in the same species: the same likewise happens to it sometimes with respect to the other fins; not to mention the colour, and some less constant marks, which however, upon the whole, distinguish it pretty well from all other fishes.

This fish has an *operculum branchiostegum* on each side: the dorsal-fin is single, directly opposite, the anal-fin is oval, and has fifteen rays: the *pectoral-fin* has eighteen divided rays. It has no *ventral-fins*. The *anal-fin* is oval, and has eleven rays: the *tail* is truncated, and has eight ramose rays: the two last fins are moveable according to the fish's inclination. The *body* is globoso-oval, with a skin over it. Its length is scarce a quarter of a yard. The *back* is green: the *line on the sides* is bent: the

the green colour of the back goes a little below it, but further down it is white. The breaſt and the belly are covered as it were with thick threads, or white pipes, which are beſt obſerved by ſtroking the fiſh with the hand upwards from the belly to the head. Behind the pectoral fins ran two brown-yellow ſpots from the back, and a circle of the ſame colour ſurrounded the dorſal-fin: the ſpot in the circle is black. The *head* is ſomewhat flat, and oval: the *mouth* round and ſmall: the jaws are equal, and conſiſt of two flat bones. In the midſt of the mouth two *teeth* are viſible, which are covered with moveable lips: the *tongue* is ſomewhat round: the *eyes* are ſmall, naked, and round: the *pupil* in the eye is black: the *irides* are yellow: the noſtrils are ſmall, and cloſe to the eyes. The fiſh was taken in the river at *Canton*; and a civil ſailor, who was preſent when the *Chineſe* caught it, gave it to me.

The 25th of *September*.

FINE weather.

A LITTLE bird, which was a good ſinger, was ſhot about the rice fields, whither it reſorted

ed to ſeek its livelihood among the rice. It was,

Lanius Schach, or the creſted red or ruſſet butcher-bird, *Edw.* 54. Its ſhape is as follows: the *bill* is ſhort and narrow, the *upper jaw* is the longeſt, it is ſharp and bent at the point. Near the head it has ſeven or more briſtles: the *lower jaw* is ſpotted: the *tongue* is lacerated at the point: the ſeven *tail feathers* are long, but the middlemoſt are longer than the reſt: its forehead is black, and about the eyes there is the ſame colour. The *wings* are black at the top; but below, and in particular on the inſide, they are whitiſh, and outwardly quite white: the *head*, the neck, and the fore-part of the back, are aſh-coloured: the hind part of the back, and the *uropygium* are red: it is red mixed with white at the top. The thighs are covered with down: the legs and feet are naked, and blackiſh. It has three fore-toes; and one hind-toe, which is as long as the middle fore-toe.

The 27th of *September*.

GENERALLY clear weather.

I CROSSED

I CROSSED over in a *Chineſe* boat to the *Daniſh Iſland*, which the *Chineſe* call *Tſiang-liao*. This is an iſland without woods, only ſeparated from the *French Iſland* by a ſtream; but is exactly like it in regard to the quality of the ſoil, and has, like the former, hills, cultivated vallies, and rice fields in the low places by the river ſide. There is ſeldom any thing planted on the hills, ſince it would be burnt up by the ſun, and the cowherds keep the cattle upon them. In ſome places were *Chineſe* graves, towards the river of *Canton*; but here we ſaw *European* ones.

I HERE met with the following natural curioſities:

Coccinella quadri-puſtulata? the foremoſt ſpots near the head are rhomboidal, but croſsways; the hindmoſt are round points, on whoſe ſides are little atoms, ſcarce viſible to the naked eye.

Andrachne fruticoſa. The *male plant* has no *calyx*. The *corolla* is bell-ſhaped, reflected, divided into ſix parts, and green: its *laciniæ* are very ſhort, and the extreme edge as it were emarginated. The *female* plant has no *calyx*; it

CLERODENDRUM fortunatum.

it has a *germen*, three *ſtyli*, and ſix *ſtigmas*: the *capſula* is almoſt round, has ſix partitions with ſix *ſeeds*. The leaves are oval, ſmooth at top, and downy below. Both male and female plants are ſhrubs.

Clerodendron fortunatum [Tab. xi.] grew by the *European* graves; and has not yet been deſcribed by any botaniſt. The plant ſmells like muſk, by which it diſtinguiſhes itſelf from all other plants growing near the graves. It is called *Hatag-nang* by the *Chineſe*: the *calyx* is monophyllous, angulated, red, divided into five parts, and perſiſtent: its *ſegments* are oval, pointed, of the length of the tube of the *corolla*, but broader than it. The *corolla* is monopetalous, quinquefid: the *upper lip* is trifid, rolled up: the *lower* bifid, bent downwards: the *filaments* are inſerted in the mouth of the *corolla*; they are bearded below, and longer than the *corolla*; two of them are ſomewhat ſhorter than the others: the *germen* is oval: the *ſtylus* filiform, and ſhorter than the *filaments*: the *ſtigma* pointed and bifid: the *drupa*, or ſtony fruit, ſtands together in couples, is green, and ſurrounded with the *calyx*. The *plant* is ramoſe, about one foot high, and ſmells

like muſk. The *flower ſtalks* are axillary, and each bears ſeveral flowers.

Gerardia glutinoſa. [Tab. ix.]

Ruellia ringens grew every where in the water on the ſhore, and was above half a yard high. It diſtinguiſhes itſelf from the *Ruellia antipoda*, which generally grows along with it, in the following particulars: the *calyx* is monophyllous, cylindrical, quinquefid, with ſmall lanceolated *ſegments*. The *corolla* is monopetalous, ringent: the *tube* cylindrical: the *faux* inflated; the *opening* bifid: the *upper lip* bifid, and reflected: the *lower* deflected, trifid, dotted in the inſide (like the *corolla* of the *Scutellaria*); the four *filaments*, of which the two loweſt are the leaſt, hang on the lower lip: the *antheræ* are ſagittated, and erected: the *germen* is oblong: the *ſtylus* is filiform, longer than the filaments, and bent near the top: the *ſtigma* is undivided, and pointed: the *capſule* is oblong, narrow, trilocular, and contains only eight flat ſeeds. The *root* is big, and repent: the *ſtalk* round, erected, ſimple: the *leaves* are oppoſite, petiolated, lanceolated, ſmooth, and ſomewhat carnoſe.

Cyperus

GERARDIA glutinosa?

Cyperus Iria?

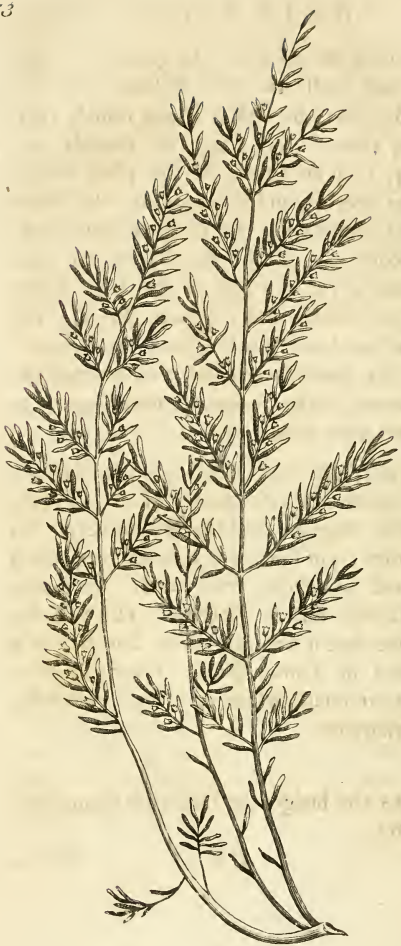
Cyperus dichotomus?

Onoclea ſenſibilis, or *Filix Indica polypodii facie*, Menz. pug. [Tab. x.]

Pange-ka (*Columnea? Chinenſis*) is the *Chineſe* name of a plant which is here plentiful along the river ſide; and generally grows in the water, together with the afore mentioned plant, and has an agreeable ſmell. It is with difficulty ranged under any of the *genera* yet known, as appears from the following deſcription: the *calyx* is double; the interior one is diphyllous, very ſmall, with pointed leaves; the ſuperior *calyx* is quinquefid, with narrow lanceolated ſegments, which are ſhorter than the tube of the *corolla*: the *corolla* is monopetalous: the *tube* is cylindrical: the *faux* bearded: the *limbus* quinquepartite: the *laciniæ* oval: the inciſion between two of the *laciniæ* on one ſide is leſs deep than on the other; and on this lean the *piſtillum* and the *ſtamina*, and are ſurrounded with a beard: the four *filaments* are filiform, two of them ſhorter; they ſtock together in pairs: the *antheræ* ſit on the ſides, and are ſmall: the *germen* is ovated, or

egg-ſhaped: the *ſtylus* filiform: the *ſtigma* in ſome manner repreſents a hat (*ſubcapitatum*) and is bent downwards: the *capſule* is oval, and contains many *ſeeds*. The plant has a *ſtalk* which lies on the ground, is round, thick, carnoſe and hairy: the *leaves* are oblong and ſerrated: the *flowers* are axillary, and likewiſe grow on the tops of the branches, and are of a blue colour: the *foot ſtalks* are rough. This plant grows on the banks of the river.

Juſticia purpurea adorned the *European* graves. This plant too has hitherto eſcaped the notice of botaniſts. The *Chineſe* call it *Happ-key-lee*, or *Happ-key-ſa*. The *calyx* is double (which diſtinguiſhes it from the other ſpecies of *Juſticia*), monophyllous, cylindrical; the exterior ends in four teeth, the interior in five briſtles; the latter is ſhorter, is covered by the exterior, and includes the *germen*: the *corolla* is monopetalous: its *tube* cylindrical: the limb ringent: the *upper lip* oblong, broad towards the point, trifid; and the *lower lip* ſmall, of equal breadth, and revolute towards the point: the two *filaments* are fixed to the inciſion of the *corolla*, they are ſubulated and bearded towards the inſide: the *antheræ* are oblong and erect: the *piſtillum* is of equal



Baeckea frutescens.

length with the *ſtamina:* the *germen* is egg-ſhaped and ſmall: the *ſtylus* filiform: the *ſtigma* undivided: the *ſtalk* is almoſt round, very ramoſe, about a foot long: the *branches* are axillary, they are thicker at the place where they are inſerted, and dichotomous: the *leaves* are oval, petiolated, run ſharp at both ends, are ſmooth, and entire: the *flowers* are red, and form at the top and on the ſides ſpikes ſcattered without order (*ſpicæ ſparſæ*): the *bracteæ* are lanceolated. This plant, which looks like *Galeopſis tetrahit* is an ornament to the graves of the *Europeans*, ſince I have not met with it any where elſe.

Bæckea fruteſcens [Tab. i.] is a little ſhrub, which grows above a quarter of a yard high, looks like *Mugwort*, and ſmells agreeably. On my return I put ſome of it into my box, which preſerved my cloths from *tinias*, or moths. The *Chineſe* call it *Tiongma*. This was the firſt time that it was carried to *Europe*. It is deſcribed in *Linn. Species Plantarum:* its flowers are ſmall, white, and ſmell ſomewhat like primroſes.

NEAR the hedges the following plants were in flower:

Bryonia cordifolia.

Hedyſarum pulchellum.

——— *triquetrum: Kaſong-ſo* in the *Chineſe* language. It grows to a man's height, and is very ramoſe.

Sigeſbeckia orientalis, by the *Chineſe* called *Chimag*, was ſupported by another ſhrub near the water, which was called *Fo-kay.*

Volckameria inermis on the ſhore.

N. B. I counted five *ſtamina* in this ſpecimen: the flowers were white.

Katong-qua, a ſhrub. The *corolla* is quadrifid, has four *filaments*, and a *piſtillum:* the *leaves* are ſhaped like a heart, and thick. It twiſts round other plants.

Conyza hirſuta, by the *Chineſe* called *Kylatſoy.*

Panicum glaucum.

Kay-in has four *filaments:* the *piſtillum* is longer than the *filaments:* the *flowers* are blue: the *leaves* are lanceolated, and woolly on the under ſide.

Ophioglo ſſum

Fig. 1.

PTERIS *semipinnata*

Fig. 2.

a The Flower. b The Fruit.

UTRICULARIA *bifida*

Ophioglossum scandens, by the *Chinese* called *Ka-yin-sey*, winds about other plants.

Rhus Chinense (or, as the *Chinese* call it, *Monkhi*) was in flower about the graves.

Rhus Javanicum, germine rubro, which the *Chinese* call *Tay-sha*.

Pteris semipinnata, by the *Chinese* called *Ka-lao*, (S. t. 3. f. r.)

Waltheria Indica. Its flower is yellow, the leaves are woolly, reflected.

Rhamnus Thea, or poor man's tea, is a shrub which grows a fathom high, and whose leaves are like those of the common tea; but the flowers belong to the first order of the fifth class of the *Linnæan* system of plants. They are very small, and rest on the top of the branches, which are again sub-divided into lesser boughs. The poor make use of its leaves instead of tea; but in this place it served as a hedge. The *Chinese* call it *Tia*.

Min tao, Dolichos scandens floribus cæruleis magnis.

Panicum alopecuroideum.

On the ſhore grew:

Alopecurus hordeiformis.

Cyperus haxpan, or *Cyperus litorum echinato capite.* cfr. *Ily Mullu*, Hort. Mal. 12. Tab. 175. grew by the river ſide.

On the hills grew:

Ocimum gratiſſimum.

Bartramia Indica. In the *Chineſe* language *Hongfa-mo.*

The creeping *Convolvulus hirtus*, with its yellow flowers, by the *Chineſe* called *Taqua.*

Cynoſurus Ægyptius.

Iſchæmum ariſtatum.

Helicteres anguſtifolia, by the *Chineſe* called *Kay-ma*, which has hitherto not yet been found.

Besides the eatable roots which I have already mentioned, another ſort is planted here, which is quite white, and is of the ſize of a pigeon's

Helicteres angustifolia

pigeon's egg, and by the *Chineſe* is called *Fyſhin*. The plant is *Arachis hypogæa*.

We likewiſe ſaw three ſorts of birds, which we met with in other parts of this country.

Ley-kao, which kept together in flocks.

Chineſe black Ravens, with white necks.

Grey-ſpotted Chineſe Magpies, which they call *Datt-ſow*. And likewiſe

Chinese *Locuſts* (*Whom-ma*), or *Gryllus viridis, capite acuminato, obtuſo, enſe adſcendente*.

October the 3d.

The cold northern winds now coming killed the gnats, which had hitherto been troubleſome.

The 6th of *October*.

Fine clear weather.

After I had preached, I went to the *French Iſland* in a *Chineſe* boat; where, beſides the plants

plants already mentioned, I found the following along the river side.

Mimosa Chinensis, inermis, stipulis foliolo longe majoribus, semicordatis. The *leaves* are seven or eight pairs: the *foliola* are numerous, lanceolated, but at the bottom more obtuse. It distinguishes itself from others of its kind particularly by the large semicordated *stipulæ*, which are fixed on the *stem* and surround it. I did not see the flowers.

Lichen (Euphorbiæ) foliaceus, pulverulentus.

Aralia Chinensis is a tree about two yards high, forms a crown, and is almost every where covered with thorns. Even the principal rib of the leaves (*rachis*) is thorny: the leaves are decompositе.

Hedysarum biarticulatum.

Senecio divaricatus.

Cacalia incana.

Aster Indicus.

Poa anguſtifolia, on high fields.

Convolvulus reptans, or wild spinage, on low places between the rice fields, in the road, but never in dry places.

The

The tree *Long-ann*, whoſe fruit the *Chineſe*, as aforementioned, eat with their tea, grows on the ſummits of the higheſt mountains, and its ſize is that of a middling plumb-tree. Its leaves were devoured by a ſort of grubs, of the following ſhape:

The grub is white, oblong, briſtly, powdered: it has eleven articulations beſides the tail, each of which has ſix briſtles: the laſt articulation is blue on both ſides, and longer than the three firſt: the fourth articulation has middling briſtles; and the three firſt are the ſhorteſt. It has three pair of fore-feet, and four pair of hind-feet, which laſt are ſtronger, and have three joints: the tail has two prominencies, and its ſides have a red ring, but at the top it is covered with a blue powder.

The 8th of *October*.

FINE weather: ſometimes rain.

THE grub which I found the 13th, on the *Indian Nightſhade* (*Solanum Indicum*) and which had been in the *aurelia* ſtate for ſome days, changed into a *ſphinx*. It was but a bad ſpecimen;

cimen; but as far as I could see, it was *sphinx atropos*, the same with what we had already caught in sailing by *Java*. See page 133.

The 11th of *October*.

THE Captain of the *Gothic Lion*, *Swedish* East Indiaman, Mr. *David Shierman*, invited me to go to *Canton* in his sloop; which offer I accepted with pleasure. We passed the custom-houses, and only shewed the colours.

SOME jugglers came to the factory, and offered to amuse us with their slight of hand. They suddenly brought living snakes before us, and restored little land-tortoises to life, &c. The whole trumpery was contained in an old ragged carpet, which they spread on the floor.

The 12th of *October*.

I THIS day took a journey in a *Palankin*[a] for two *mase* and five *kandarin*, about half a *Swedish* mile up the country (about three *English* miles), to see the funeral of the *Dutch*

[a] *Kiao*, Bay. Mus. lib. i. p. 48.

supercargo

PTERIS vittata

supercargo *Roberts*, who died the second of this month, in the 54th year of his age. All the captains and supercargoes were invited to come at two o'clock in the afternoon, and to follow the corpse to the aforementioned burying-place. On going thither I saw the following plants, which covered the old walls of the city.

Pteris vittata. [Tab. iv.]

Barleria cristata. Its blue flowers were in several places the ornaments of the wall.

Ficus Indica, with round *figs*.

Urtica nivea, which I have seen no where but on the walls of *Canton*.

Convolvulus reptans covered the graves, where some boys were met together with fishing-rods in their hands. They made use of a kind of large *dragon-fly* (*Libellula Chinensis*) as a bait. I understood they were catching frogs, but had as yet tried their luck in vain. It is happy for us that the art of fishing is not risen to such a pitch of perfection as hunting; for then fishes would be as scarce in our lakes as deer are in our woods.

Justicia procumbens grew on the road.

A good

A GOOD way out of town, on the right of the high road, I arrived at the *European* burying-place, which was on a hill without any fence, or diſtinction from the other hills. The inſcriptions on the tomb-ſtones are not all legible, on account of the rubbiſh lying on them: however, I could ſee that *Swediſh* captains and ſupercargoes had died in this country. The corpſe which was now to be buried was carried by ſix *Dutch* grenadiers. The proceſſion followed in *Palankins* without order. The *Chineſe* merchants who were here preſent, mourned with white, long, cotton handkerchiefs, which were tied as the ribbands of an order, over their common clothes. This ſort of mourning was diſtributed to all the reſt by the young widow of the deceaſed. She was born at *Batavia*, and had accompanied her huſband hither, but got admiſſion into the ſuburbs of *Canton* with much difficulty. The people in this country are very ſingular, looking upon foreign ladies as not much better than contraband goods.

A BLACK tomb-ſtone was laid upon the grave, on which an inſcription to the memory of the deceaſed was engraved in great white letters

letters in *Dutch*, mixed with ſome *Latin*. On this occaſion people of all nations were aſſembled together.

THE *Chineſe* had erected tents about the tombs, and diverted the funeral proceſſion with their rope-dancers.

The 13th of *October*.

AFTER I had a ſecond time preached in the factory, the remainder of the day would not allow of any trip out of town; and for this reaſon I only walked about the neighbouring ſtreets, to ſee whether the *Chineſe* had any curioſities in their ſhops, for they make no diſtinction with regard to *Sunday*. I found a ſort of linen ſomewhat rough to the touch, which was ſaid (together with another very common brown ſtuff) to be made of a kind of bark. This linen was very white, and as narrow as the afore-mentioned *Canton cotton-linen*; but it was neither cotton nor linen.

FLAX is ſo rare a commodity in the Eaſt, that many have judged with great probability, that

the fine linen of the rich man, Luke xvi. 19. was no more than our common linen.

ABRUS *precatorius Linn. Syſt. Nat. Ed.* 12. (in the third edition of the *Spec. Plantar. Linnæus* calls it *Glycine Abrus*) is a ſort of little red peaſe, with a black ſpot, which were ſold in the chandler-ſhops. I bought ſome for a low ſort of coin; but ſome children ſeeing me buy them, gathered about me and deſired me to give them ſome, which I did, and was glad to get rid of them in this manner: I was told, that they could buy fruit with them; that they were valued as the loweſt coin, and uſed in weighing gold.

A SORT of *muſk*, which the *Chineſe* call *Wadnamm*, was kept in great bladders, and ſold much cheaper than in our country.

[b] BUPRESTIS *maxima*, *Muſ. Reg. Suec.* 82. a fine green inſect, which the *Chineſe* had dried, and faſtened leaden wings to it (which were ſo painted as to make them look like butter-

[b] The *Bupreſtis max.* is a ſpecies of the *coleoptera*; and muſt make a ſtrange monſter when diſguiſed by the wings of the *lepidoptera*.

flies),

flies), was to be sold in the vaults among other trifles.

The next day I again returned on board the ship; but the minister from the *Gothic Lion*, Mr. *Toreen*, went to town. When two ships are at *Canton* at the same time, one chaplain generally officiates aboard the ships, and the other in town.

The 18th of *October*.

Pack-fanny is the *Chinese* name of a long, transparent, white fish, which is caught in this river, and being dried is boiled and eaten. It is *Albula Chinensis*, and has the following characters: the single *dorsal-fin* opposite the *anus* is low, right-angled, and has 12 rays: the *pectoral-fins*, somewhat below the head, are oval, and have 10 rays: the *ventral-fins* are in the middle of the fish's length, and are wedge-shaped, and have eight rays: the *anal fin* is in some measure articulated, and has 26 rays: the tail is furcated: the body is of the length of a span, and is white, transparent, and without scales: the head is narrow, lanceolated: the *operculum branchiostog.* consists

of two ſcales: the jaws are almoſt equal: the teeth are ſharp, faſtened in the jaws, and bent backwards: the eyes are placed on the ſides, and are almoſt round: the body, as far as the ventral fins, is almoſt round, but lower ſomewhat broad.

Rhamnus *œnopolia*, is by the *Chineſe* called *Kog-ne-imm*. On the leaves I found a *larva hirſuta, luteo, cœruleo, fuſco et albo, variegata*. Its *antennæ* are long, like the hair of a whiſker, black, but blue at the bottom: the head is browniſh-yellow, like lattice-work: the articulated back is dotted yellow and white: between the third and fourth row of dots are two white hairy tufts. Twelve pair of (blue) *elevations* had black hair on the ſides, ſome (white ones) on the tail excepted. The three pair of fore-feet are brown, the four pair of hind-feet likewiſe, and beſides theſe is a pair under the tail. The *larva* is about an inch long, and of the thickneſs of a ſmall gooſequill.

Conyza *Chinenſis* grew among the ſtones on high places. And alſo

Eriocaulon ſexangulare.

Oldenlandia umbellata.

Mollugo

Mollugo pentaphylla.

Ammania baccifera.

Urena procumbens, floribus minoribus, a little tree with a very low ſtem, whoſe boughs hung round about on the ground. I only found a ſingle one of this kind, and that on the ſummit of a mountain. At firſt ſight its fructification looked like that of our *agrimony*.

A PLANT like the *Bromelia* ſtood near the water; but I could not aſcertain it, as the fructification was wanting.

OF ſuch plants as are good againſt ſcurvy I found none growing ſpontaneouſly in *China*; nor one with a cruciated flower (*Tetradynamia*). Indeed I did not hear of any body here who had been much incommoded with the ſcurvy. But in thoſe countries where this diſeaſe is common, anti-ſcorbutic plants grow in plenty, eſpecially on the ſea-ſhores; that the ſailors, who are moſt afflicted with this diſtemper, may, as ſoon as they land, have the neceſſary remedies at hand. Thus we may ſee in every place the cleareſt marks of the all-wiſe diſpoſitions of our great CREATOR; and the more we conſider nature, the more we are led to

the knowledge of him, who is the LORD of the univerſe.

THE harveſt time now came on, for which reaſon the *Chineſe* aſſembled in great numbers, to mow their rice, carry it home, and dry it in convenient places.

THE ſailor, who ſome days ago fell from our ſhip into the river, and had been by the rapid ſtream carried immediately to the bottom, was now found floating on the water, as commonly happens on the third day. We buried him very late at night, on the *Daniſh Iſland*.

The 20th of *October*.

TO-DAY our boat was ſent to fetch water from the *Daniſh Iſland*, whither I went with it. We entered with the tide into a canal between the rice fields, nearer to the mouth of the river than in the above-mentioned burying-place. We fetched the water out of a pit at the bottom of a mountain; and nothing but the continual ſupply of water could make us believe that this was a ſpring; and even that might

might arise from the water coming down the hills. The inhabitants, who were here in their plantations, had purposely stirred the water to make it muddy, that we might not go higher up; for mischievous people sometimes do them a good deal of mischief by pulling up their potatoes, sugar-canes, &c. As I went on between their uninclosed fields, I was asked by them, what countrymen we were? and upon my answering, we are all of us *Soyamen* (for so they call the *Swedes*), I met with no further opposition; but a *Chinese* told me, that some *Englishmen* had pulled up several roots in his garden the day before: he then accompanied me, and offered me some potatoes; but I was more thirsty than hungry, and the water was so wretched, though it was become clear, that when it was used for tea, it stained cotton with blue spots. From this we concluded it was a mineral water; but we wanted the necessary materials to try it. It became milky with sugar of lead.

Oxalis *corniculata*, by the *Chinese* called *Syn-mee*, grew near the spring, and in other low and shady places. The *corollæ* is as long again as the *calyx*: the *capsule* is pentagonal, oblong, with a point, and the whole plant is hairy.

Ruellia

Ruellia *crispa* grew under a tree on a high mountain. The *calyx* is double, persistent, and viscous; the lower one is triphyllous, its *foliola* linear and ciliated; the upper one is quinquefid, with segments as in the inferior one: neither of them are deciduous, but the flower is so: the *corolla* is infundibuliform, cylindrical below, and inflated at top: the *faux* is bearded: the *limbus* is quinquefid: the *laciniæ* are almost round, equal to each other, emarginated, and somewhat reflected: the four *filaments* are pointed, and set at the bottom of the cavity in the *corolla*: the two longer ones are woolly, and bend towards the incisions of the *limbus*: the *antheræ* are oblong, triangular, erected: the *pistillum* is longer than the *filaments*: the *germen* is oblong: the *stylus* is filiform, and dentated at the top: the *stigma* is long, sharp-pointed, and often bent. The plant is a *suffrutex*, and has the appearance of our yellow cock's comb (*Rhinanthus crista galli*) it is rough, and lies on the ground. The root is ramose: the stem is almost round, knobby, naked below, woody, and ramose: the leaves are alternate, lanceolated, oval, petiolated, undulated, green on the upper, but whitish on the under side. The flowers

flowers grow at the top in globoſe *cymæ*, and are yellow: the *bracteæ* are lanceolated. It grows on open hills. The *Chineſe* name is *Patt-fa*.

MONARDA *Chinenſis* grew on a barren mountain. The *calyx* is double; the ſuperior one is pentaphyllous, with leaves of equal breadth; the lower is diphyllous: the *corolla* is monopetalous: its tube is cylindrical, and longer than the *calyx*: the upper-lip is undivided, and ſmall; but the lower is trilaciniated, inflected, and longer than the upper one: the *ſtamina* are two, with a ſingle *piſtillum*. Its yellow flowers are axillary, and very ſmall. The ſtalk is fibrous. It grows on barren places.

LOBELIA *Zeylanica* flowered in the ſame place with the former. The *calyx* is quinquefid, expanded, hairy below, with oblong fringes of the length of the *corolla*, which is monopetalous and faſtened to the *calyx*: its tube is cylindrical: the *limbus* quinquefid: the upper-lip is trifid, with oval, cuſpidated, reflected, *laciniæ*: the lower-lip is bifid, its *laciniæ* are the ſame as thoſe of the upper-lip: the five *filaments* are filiform, broad, of the

the length of the tube, and come out of the bell-ſhaped *nectarium*; two of them are hairy below: the *antheræ* grow together into an oblong cylinder: the *piſtillum* is of the length of the *filaments*: the *germen* is almoſt egg-ſhaped: the *ſtylus* is filiform: the *ſtigma* is bifid or bilabiated: the *capſule* is egg-ſhaped: the *ſeeds* are numerous, and very ſmall. The plant grows in watry and ſhady places, and creeps: the *ſtalk* is round: the *leaves* are alternate, cordated, crenated, ſmooth, petiolated: the *flower-ſtalks*, or *peduncles*, are axillar, are the length of the leaves, and each bears only one flower: the flowers are blue.

Evolvulus *alſinoides* is a very ſmall, but fine and ſcarce plant, which likewiſe was an inhabitant of a barren mountain; and at a diſtance looked like flax: the *calyx* is quinquefid, with ſharp *ſegments*, which are ſhorter than the *corolla*; this is monopetalous and inflated: the five *filaments* are ſhorter than the *corolla*: the *antheræ* are oblong: the *germen* is ſingle: the *ſtylus* quadrifid: the *ſtigmas* entire. The plant is of the length of a ſpan, and looks like the common flax.

Hedysarum *triflorum*; the flower of this plant has eight *antheræ*, whereof one is ſingle, but

but the other ſeven are connate, or grow together.

POLYGONUM *Chinenſe*, by the *Chineſe* called *Ka-yong-moa*.

SOLIDAGO *Chinenſis*, *caule procumbente*, *ramis alternis*, *foliis radicalibus linearibus*. It grows ſcarce one foot high.

POLYGALA *ciliata*.

VERBESINA *Chinenſis*, by the *Chineſe* called *Kaling-fa*.

CLEMATIS *Chinenſis*. It has from three to ſix *piſtilla*: the *ſtyli* are plumoſe, reflected, and placed in a circle. I have ſeen no filaments. The ſhrub is one of the climbers, and very ramoſe.

COMMELINA *communis*.

COMMELINA *Chinenſis*, or, as the *Chineſe* call it, *Ka-tyaa*. The *petals* are all equal in ſize: the *ſtem* is knobby: the *leaves* are narrow, lanceolated, rough, alternate, and end in a *vagina*. Perhaps it is the ſame with the *Commelina nudiflora*.

ARTEMISIA *vulgaris* is the only *Swediſh* plant in this country [c], though it varies in ſome meaſure from ours. The *Chineſe* heal wounds with it; and to that purpoſe apply the freſh plant bruiſed. They call it *Gnai*.

BACCHARIS *Indica*, by the *Chineſe* called *Kate-gnai*.

BUXOIDES *aculeata*, what the *Chineſe* call *Sow-pann-ghipp*, is like our *box-tree*, but thorny. I did not ſee its parts of fructification.

ZANTHOXYLON *trifoliatum*. A tree which has not been obſerved before. The *Chineſe* call it *Lack-fa*.

CONYZA *hirſuta*, of which the *Chineſe* name is *Kang-gan-fa*.

KATOA is a long climbing plant, with round leaves and red flowers. It was without flowers when I ſaw it.

S'YOE-LOCK-TAO (*Dolichos ſcandens maximus*) had large black beans, which were ſaid

[c] This is alſo an *Engliſh* plant, *mugwort*.

to be poiſonous. The pods likewiſe grow black when the fruit ripens.

NAUCLEA *orientalis* grew on an hill, and was now in flower. I made the following remarks on it: the partial *calyces* are monophyllous, quadrifid, piloſe on the margin: the *corolla* is infundibuliform: its tube is almoſt cylindrical: the *faux* is inflated and woolly: the *limbus* is quadrifid and reflected: the four *filaments* are ſhort, faſtened in the *faux*: the *antheræ* are ſmall, though longer than the *filaments*, and erected: the *ſtigma* is narrow, and bifid. The plant grows buſhy, and is of the length of a ſpan. The *root* creeps, and ſhoots many branches: the *ſtem* is quadrangular: the flowers form a *capitulum* or head: the *leaves* are oval, lanceolated, without inciſions or foot-ſtalks, and oppoſite. The *Chineſe* call it *Moy-fa*.

CASSYTHA *filiformis*. The deſcription of the genus is to be met with in *Linnæi Gen. Plantarum*. The plant is ſcandent, filiform, rough, and commonly climbs on the *Euphorbia*. The little *branches* are in no order: the *flowers* grow in bunches like grapes: the *ſtipulæ* on the branches are oval and ſmall.

In the *Eaſt Indies*, boats and veſſels are neither tarred, nor their chinks caulked (filled up with tow); but they are made to keep out the water with a ſort of cement, which is prepared in the following manner: the aforementioned plant is taken and beaten to a pulp; then ſome lime, both pounded and ſifted, is kneaded amongſt it, till it grows to a proper conſiſtence. This cement ſecures their boats longer from ſpringing leaks, than tarring; beſides that it does not become fluid as tar does in hot countries. When a perſon's head is rubbed with the ſlime which is ſqueezed out of the *Caſſytha*, it makes the hair grow the thicker. When the bruiſed ſtalks are put into milk, it curdles, and the whey is uſeful in agues. See *Rumph. Herbar. Amb.*

END OF VOL. I.

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